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(71) 申请人 启愈生物技术(上海)有限公司
 地址 200120 上海市浦东新区中国(上海)自由贸易试验区张衡路1227号、哈雷路1118号孵化楼第二层204室、206室、207室

(72) 发明人 屈向东 都业杰 潘琴 郑翰

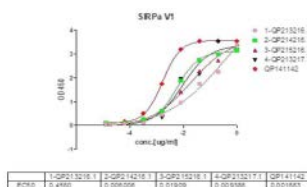
(74) 专利代理机构 上海政济知识产权代理事务所(普通合伙) 31479
 专利代理师 郑金彩

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 序列表175页 附图13页

(54) 发明名称
 一种靶向人SIRP α 蛋白的特异性抗体及其应用

(57) 摘要
 本发明提供了一种新的靶向人SIRP α 的抗体,能用于提高表达CD47的肿瘤的治疗效果。该抗体可以结合SIRP α 蛋白,阻断吞噬细胞表面SIRP α 与肿瘤细胞CD47的相互作用,增强对肿瘤细胞的吞噬作用。



1. 一种抗体或抗原结合片段,其特征在於:包含A-B中所列氨基酸序列中的一种或几种:

A. SEQ ID NO:183-224所示的氨基酸序列;

B. 与SEQ ID NO:183-224所示的氨基酸序列相差不多于3个氨基酸的氨基酸序列。

2. 如权利要求1所述的一种抗体或抗原结合片段,其特征在於:包含

含如SEQ ID NO:186-188、SEQ ID NO:189-191、SEQ ID NO:192-194、SEQ ID NO:198-200、SEQ ID NO:201-203、SEQ ID NO:207-209、SEQ ID NO:213-215、SEQ ID NO:219-221、SEQ ID NO:225-227所示的CDR氨基酸序列或其变体中的一种或多种的轻链;

以及

含如SEQ ID:183-185、SEQ ID NO:195-197、SEQ ID NO:204-206、SEQ ID NO:210-212、SEQ ID NO:216-218、SEQ ID NO:222-224、SEQ ID NO:228-230所示的CDR氨基酸序列或其变体中的一种或多种的重链。

3. 如权利要求1所述的一种抗体或抗原结合片段,其特征在於:包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

其中,

所述CDR-H1的序列如SEQ ID:183所示;

所述CDR-H2的序列如SEQ ID:184所示;

所述CDR-H3的序列如SEQ ID:185所示;

所述CDR-L1的序列选自如SEQ ID:186、189、192所示的CDR氨基酸序列中的任一项;

所述CDR-L2的序列选自如SEQ ID:187、190、193所示的CDR氨基酸序列中的任一项;

所述CDR-L3的序列选自如SEQ ID:188、191、194所示的CDR氨基酸序列中的任一项。

4. 如权利要求1所述的一种抗体或抗原结合片段,其特征在於,选自如下A-F所示的抗体或抗原结合片段:

抗体或抗原结合片段A. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

其中,

所述CDR-H1的序列如SEQ ID:195所示;

所述CDR-H2的序列如SEQ ID:196所示;

所述CDR-H3的序列如SEQ ID:197所示;

所述CDR-L1的序列如SEQ ID:198所示;

所述CDR-L1的序列如SEQ ID:199所示;

所述CDR-L1的序列如SEQ ID:200所示;

抗体或抗原结合片段B. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

其中,

所述CDR-H1的序列如SEQ ID:204所示;

所述CDR-H2的序列如SEQ ID:205所示；
所述CDR-H3的序列如SEQ ID:206所示；
所述CDR-L1的序列如SEQ ID:201所示；
所述CDR-L1的序列如SEQ ID:202所示；
所述CDR-L1的序列如SEQ ID:203所示；
抗体或抗原结合片段C. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；

其中,
所述CDR-H1的序列如SEQ ID:210所示；
所述CDR-H2的序列如SEQ ID:211所示；
所述CDR-H3的序列如SEQ ID:212所示；
所述CDR-L1的序列如SEQ ID:207所示；
所述CDR-L1的序列如SEQ ID:208所示；
所述CDR-L1的序列如SEQ ID:209所示；
抗体或抗原结合片段D. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；

其中,
所述CDR-H1的序列如SEQ ID:216所示；
所述CDR-H2的序列如SEQ ID:217所示；
所述CDR-H3的序列如SEQ ID:218所示；
所述CDR-L1的序列如SEQ ID:213所示；
所述CDR-L1的序列如SEQ ID:214所示；
所述CDR-L1的序列如SEQ ID:215所示；
抗体或抗原结合片段E. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；

其中,
所述CDR-H1的序列如SEQ ID:222所示；
所述CDR-H2的序列如SEQ ID:223所示；
所述CDR-H3的序列如SEQ ID:224所示；
所述CDR-L1的序列如SEQ ID:219所示；
所述CDR-L1的序列如SEQ ID:220所示；
所述CDR-L1的序列如SEQ ID:221所示；
抗体或抗原结合片段F. 包含

含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；

其中,

所述CDR-H1的序列如SEQ ID:228所示；

所述CDR-H2的序列如SEQ ID:229所示；

所述CDR-H3的序列如SEQ ID:230所示；

所述CDR-L1的序列如SEQ ID:225所示；

所述CDR-L1的序列如SEQ ID:226所示；

所述CDR-L1的序列如SEQ ID:227所示。

5. 如权利要求1所述的抗体或抗原结合片段,其特征在于:

重链包含SEQ ID:44所示的氨基酸序列;

轻链包含SEQ ID:174、SEQ ID:72或SEQ ID:75所示的氨基酸序列;

或

重链包含SEQ ID:85所示的氨基酸序列;

轻链包含SEQ ID NO:34所示的氨基酸序列;

或

重链包含SEQ ID:142所示的氨基酸序列;

轻链包含SEQ ID NO:141所示的氨基酸序列;

或

重链包含SEQ ID:146所示的氨基酸序列;

轻链包含SEQ ID NO:145所示的氨基酸序列;

或

重链包含SEQ ID:160所示的氨基酸序列;

轻链包含SEQ ID NO:159所示的氨基酸序列;

或

重链包含SEQ ID:164所示的氨基酸序列;

轻链包含SEQ ID NO:163所示的氨基酸序列;

或

重链包含SEQ ID:170所示的氨基酸序列;

轻链包含SEQ ID NO:169所示的氨基酸序列。

6. 如权利要求1-5任一所述的抗体或其抗原结合片段,其特征在于:

所述抗体或其抗原结合片段为靶向人SIRP α 蛋白的特异性抗体。

7. 如权利要求1-5任一所述的抗体或其抗原结合片段,其特征在于:

所述抗体是人源化单克隆抗体。

8. 如权利要求1-5任一所述的抗体或其抗原结合片段,其特征在于:

抗体轻链恒定结构域衍生自人 κ 轻链恒定结构域;

抗体重链恒定结构域衍生自人IgG1、IgG2、IgG3或IgG4重链恒定结构域。

9. 如权利要求1-5任一所述的抗体或其抗原结合片段,其特征在于:

用于制备抑制人CD47与人SIRP α 结合,且不与SIRP γ 特异性结合的药物。

10. 如权利要求1-5任一所述的抗体或其抗原结合片段,其特征在于,具有如下用途中的一种或多种:

A. 用于制备治疗、缓解和抑制癌症及相关疾病的药物;

- B. 用于制备治疗和缓解感染及相关症状的药物；
- C. 用于制备治疗免疫调节疾病及相关疾病的药物；
- D. 用于制备抑制肿瘤生长的药物。

11. 如权利要求10所述的抗体或其抗原结合片段,其特征在于:

所述癌症或肿瘤选自下组织或部位:结直肠、乳腺、卵巢、胰腺、胃、食管、前列腺、肾、宫颈、骨髓癌、淋巴瘤、白血病、甲状腺、子宫内膜、子宫、膀胱、神经内分泌、头部颈部、肝、鼻咽、睾丸、小细胞肺癌、非小细胞肺癌、黑素瘤、基底细胞皮肤癌、鳞状细胞皮肤癌、隆突性皮肤纤维肉瘤、梅克尔细胞癌、成胶质细胞瘤、胶质瘤、肉瘤、间皮瘤,和骨髓增生异常综合症。

12. 如权利要求10所述的抗体或其抗原结合片段,其特征在于:

- A-D项所述药物的剂型为经胃肠道以外给药途径剂型;
- A-D项所述药物中抗体或抗原结合片段的含量为0.1-100mg/kg。

一种靶向人SIRP α 蛋白的特异性抗体及其应用

技术领域

[0001] 本发明涉及抗体领域,具体地,涉及一种靶向人SIRP α 蛋白的特异性抗体及其应用。

背景技术

[0002] 据AACR预计,2018年美国新确诊恶性肿瘤病例将达到180万例,由于癌症死亡人数将超过60万,仅次于心脏病。而据中国国家癌症中心公布的数据,2014年中国新确诊癌症共计380万例,而当年由于癌症死亡人数达到230万人。细胞增殖失控是导致恶性肿瘤形成的关键因素,而肿瘤细胞为了加速自身的生长,保护自己免于受到机体免疫系统的攻击,在漫长的进化过程中获得了一系列途径逃逸宿主对肿瘤细胞的免疫监控。根据Schreiber提出的癌症免疫编辑理论,肿瘤细胞与宿主免疫系统的关系可以分为3种不同阶段:清除(elimination)、平衡(equilibrium)以及逃逸(escape)。在“清除”状态下,新生肿瘤细胞具有较强抗原性,易被免疫系统识别并清除;而逃过清除作用存活下来的肿瘤细胞则会与免疫系统进入“平衡”状态,表现为宿主荷瘤生存的状态。但肿瘤细胞在宿主免疫系统的选择压力下的基因突变积累到一定程度时就会打破平衡,进入到最终的“逃逸”状态。在这个阶段的肿瘤细胞可以产生一系列恶性表型,关闭抑癌响应机制,诱导正常的免疫反应,从而被识别为正常细胞。肿瘤细胞中的细胞凋亡信号通路也发生变化,使免疫细胞诱导的肿瘤细胞凋亡机制失效。此外,由于肿瘤细胞不受抑制的快速生长,形成的组织结构会产生抑制免疫细胞的微环境。在肿瘤微环境中,肿瘤细胞会释放具有免疫抑制功能的分子,如 VEGF、TGF- β 、IL-10等,抑制骨髓树突状细胞(dendritic cell)的激活和分化,从而抑制适应性免疫系统。同时能在外周血和淋巴结诱导产生表达CTLA-4的调节性T细胞(Treg),对其他免疫细胞产生抑制作用,导致免疫系统产生对肿瘤的免疫耐受。

[0003] 肿瘤微环境中的肿瘤相关巨噬细胞(TAM,tumor associated macrophage)的吞噬作用受到抑制,其原因在于几乎所有肿瘤细胞表面都高表达CD47蛋白,能够与骨髓细胞表面的信号调节蛋白 α (signal regulatory protein α ,SIRP α)结合向机体发出“don't eat me”或“self”的信号,从而抑制吞噬作用。CD47又名整合素相关蛋白(IAP,intergrin-associated protein),是一种广泛表达的跨膜糖蛋白,属于免疫球蛋白(Ig)超家族。CD47分子量为50kD,结构包含了大量的糖基化的N-末端IgV可变结构域,5个高度疏水的跨膜结构域和一个短的C-末端胞质尾区,C-末端胞质尾区的4种选择性拼接形式决定了CD47在不同组织的表达。与之相对应的SIRP α 又被称为SHPS-1、BIT或CD172a蛋白,它是一种跨膜蛋白,主要在骨髓细胞(myeloid cell)上表达,包括巨噬细胞、骨髓树突状细胞、粒细胞、肥大细胞及其前体细胞。SIRP α 由胞外的3个Ig样结构域和胞质内的4个酪氨酸残基组成,该4个酪氨酸残基被推测认为是磷酸化位点。当发生磷酸化后,SIRP α 通过结合SHP-1/2蛋白的SH2结构域并使之激活,从而激活下游信号通路。SHP-1和SHP-2蛋白的表达具有组织特异性,因此SIRP α 是一种停靠蛋白,通过响应胞外刺激招募及激活下游蛋白磷酸酶。Oldenborg首先报道了成熟红细胞(RBC,red blood cell)通过CD47与脾脏巨噬细胞SIRP α 结合保护自身

免遭后者的清除。随后研究人员发现RBC上的也能与单核细胞SIRP α 结合从而抑制依赖Fc γ 受体的吞噬作用,这是通过对吞噬作用中的关键分子肌球蛋白-IIA (myosin-IIA) 去磷酸化作用实现的。临床上多种实体瘤和血液恶性肿瘤中都发现了CD47高表达的现象,包括急性髓样白血病(AML)、急性淋巴白血病(ALL)、慢性髓样白血病(CML)、非霍奇金淋巴瘤(NHL)、乳腺癌、膀胱癌、卵巢癌、结肠癌等,其本质是肿瘤细胞通过上文上述调节机制逃避巨噬细胞的细胞清除作用。CD47 还通过与其他受体结合或通过其胞内细胞质区域的信号传导对其他生物过程产生影响。CD47与血小板反应蛋白-1 (TSP-1, Thrombospondin-1) 或血管内皮生长因子受体2 (VEGFR-2) 的相互作用抑制血管生成,从而限制肿瘤生长。

[0004] 已有多项研究证明CD47抗体或者SIRP α -Fc重组蛋白能够在不同的小鼠PDX模型中发挥作用,而与阿糖胞苷、多柔比星、紫杉醇、顺铂等常见化疗药物或利妥昔单抗、阿仑单抗、西妥昔单抗、曲妥珠单抗联合使用的报道中也具有良好的效果。Sokolosky等则首次报道了联合使用CD47纳米抗体和PD-L1能够在黑色素瘤B16F10细胞的Syngeneic模型中表现出良好的抗肿瘤作用。近年来也有数个作用于CD47-SIRP α 通路的抗体进入临床I期,包括Hu5F9-G4 (恶性实体瘤:NCT02216409,恶性血液瘤:NCT02678338、NCT03248479,结肠癌:NCT02953782,B细胞非霍奇金淋巴瘤:NCT02953509),CC-90002 (AML和骨髓增生异常综合症:NCT02641002,晚期实体瘤和血液瘤:NCT02367196),SRF231 (晚期实体瘤和血液瘤:NCT03512340),SIRP α -Fc重组蛋白TTI-662 (实体瘤:NCT02890368,恶性血液瘤和实体瘤:NCT02663518,骨髓瘤和淋巴瘤:NCT03530683),ALX148 (晚期实体瘤和淋巴瘤:NCT03013218)。

[0005] CD47本身的生物学功能决定了CD47治疗性抗体和SIRP α -Fc重组蛋白可能具有血液系统毒性或者有引发贫血的风险,这在CD47基因敲除NOD鼠和使用CD47抗体进行治疗的小鼠模型中均有报道。此外,内皮细胞CD47被报道能够通过细胞黏附作用与SIRP γ 相互作用促进T细胞的跨内皮迁移(transendothelial migration),而SIRP γ 主要表达于T细胞而非骨髓细胞。

[0006] 因此,使用SIRP α 抗体作为阻断CD47-SIRP α 信号通路的更优选择。Stanford大学Weissman研究组证明其筛选出的人源化SIRP α 抗体KWAR23与利妥昔单抗联用能够在敲入人源SIRP α 基因的SRG鼠 (Rag2^{-/-} Il12r γ ^{-/-}) 中有效抑制Burkitt淋巴瘤生长,但KWAR23单独使用则无明显药效。

发明内容

[0007] 本发明旨在克服上述问题,提供一种新的SIRP α 抗体,能够特异性结合人SIRP α 蛋白,阻断CD47-SIRP α 信号通路。

[0008] 本发明提供了一种抗体或抗原结合片段,其特征在于:包含A-B中所列氨基酸序列中的一种或几种:

[0009] A. SEQ ID NO:183-224所示的氨基酸序列;

[0010] B. 与SEQ ID NO:183-224所示的氨基酸序列相差不多于3个氨基酸的氨基酸序列。

[0011] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:包含

[0012] 含如SEQ ID NO:186-188、SEQ ID NO:189-191、SEQ ID NO:192-194、SEQ ID NO:198-200、SEQ ID NO:201-203、SEQ ID NO:207-209、SEQ ID NO:213-215、SEQ ID NO:219-

221、SEQ ID NO:225-227 所示的CDR氨基酸序列或其变体中的一种或多种的轻链；

[0013] 以及

[0014] 含如SEQ ID:183-185、SEQ ID NO:195-197、SEQ ID NO:204-206、SEQ ID NO:210-212、SEQ ID NO: 216-218、SEQ ID NO:222-224、SEQ ID NO:228-230所示的CDR氨基酸序列或其变体中的一种或多种的重链。

[0015] 进一步地,本发明提供的一种抗体或抗原结合片段,其特征在于:含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

[0016] 其中,

[0017] 上述CDR-H1的序列如SEQ ID:183所示;

[0018] 上述CDR-H2的序列如SEQ ID:184所示;

[0019] 上述CDR-H3的序列如SEQ ID:185所示;

[0020] 上述CDR-L1的序列选自如SEQ ID:186、189、192所示的CDR氨基酸序列中的任一项;

[0021] 上述CDR-L2的序列选自如SEQ ID:187、190、193所示的CDR氨基酸序列中的任一项;

[0022] 上述CDR-L3的序列选自如SEQ ID:188、191、194所示的CDR氨基酸序列中的任一项。

[0023] 进一步地,本发明提供的一种抗体或抗原结合片段,其特征在于:选自如下A-F所示的抗体或抗原结合片段:

[0024] 抗体或抗原结合片段A.包含

[0025] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

[0026] 其中,

[0027] 上述CDR-H1的序列如SEQ ID:195所示;

[0028] 上述CDR-H2的序列如SEQ ID:196所示;

[0029] 上述CDR-H3的序列如SEQ ID:197所示;

[0030] 上述CDR-L1的序列如SEQ ID:198所示;

[0031] 上述CDR-L1的序列如SEQ ID:199所示;

[0032] 上述CDR-L1的序列如SEQ ID:200所示;

[0033] 进一步地,本发明提供的一种抗体或抗原结合片段,其特征在于:

[0034] 抗体或抗原结合片段B.包含

[0035] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区;

[0036] 其中,

[0037] 上述CDR-H1的序列如SEQ ID:204所示;

[0038] 上述CDR-H2的序列如SEQ ID:205所示;

[0039] 上述CDR-H3的序列如SEQ ID:206所示;

[0040] 上述CDR-L1的序列如SEQ ID:201所示;

[0041] 上述CDR-L1的序列如SEQ ID:202所示;

- [0042] 上述CDR-L1的序列如SEQ ID:203所示；
- [0043] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:
- [0044] 抗体或抗原结合片段C.包含
- [0045] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；
- [0046] 其中,
- [0047] 上述CDR-H1的序列如SEQ ID:210所示；
- [0048] 上述CDR-H2的序列如SEQ ID:211所示；
- [0049] 上述CDR-H3的序列如SEQ ID:212所示；
- [0050] 上述CDR-L1的序列如SEQ ID:207所示；
- [0051] 上述CDR-L1的序列如SEQ ID:208所示；
- [0052] 上述CDR-L1的序列如SEQ ID:209所示；
- [0053] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:
- [0054] 抗体或抗原结合片段D.包含
- [0055] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；
- [0056] 其中,
- [0057] 上述CDR-H1的序列如SEQ ID:216所示；
- [0058] 上述CDR-H2的序列如SEQ ID:217所示；
- [0059] 上述CDR-H3的序列如SEQ ID:218所示；
- [0060] 上述CDR-L1的序列如SEQ ID:213所示；
- [0061] 上述CDR-L1的序列如SEQ ID:214所示；
- [0062] 上述CDR-L1的序列如SEQ ID:215所示；
- [0063] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:
- [0064] 抗体或抗原结合片段E.包含
- [0065] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；
- [0066] 其中,
- [0067] 上述CDR-H1的序列如SEQ ID:222所示；
- [0068] 上述CDR-H2的序列如SEQ ID:223所示；
- [0069] 上述CDR-H3的序列如SEQ ID:224所示；
- [0070] 上述CDR-L1的序列如SEQ ID:219所示；
- [0071] 上述CDR-L1的序列如SEQ ID:220所示；
- [0072] 上述CDR-L1的序列如SEQ ID:221所示；
- [0073] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:
- [0074] 抗体或抗原结合片段F.包含
- [0075] 含CDR-H1、CDR-H2和CDR-H3序列的重链可变区,以及含CDR-L1、CDR-L2和CDR-L3序列的轻链可变区；
- [0076] 其中,

- [0077] 上述CDR-H1的序列如SEQ ID:228所示；
- [0078] 上述CDR-H2的序列如SEQ ID:229所示；
- [0079] 上述CDR-H3的序列如SEQ ID:230所示；
- [0080] 上述CDR-L1的序列如SEQ ID:225所示；
- [0081] 上述CDR-L1的序列如SEQ ID:226所示；
- [0082] 上述CDR-L1的序列如SEQ ID:227所示。
- [0083] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:重链包含SEQ ID:44所示的氨基酸序列；
- [0084] 轻链包含SEQ ID:174、SEQ ID:72或SEQ ID:75所示的氨基酸序列；
- [0085] 或
- [0086] 重链包含SEQ ID:85所示的氨基酸序列；
- [0087] 轻链包含SEQ ID NO:34所示的氨基酸序列；
- [0088] 或
- [0089] 重链包含SEQ ID:142所示的氨基酸序列；
- [0090] 轻链包含SEQ ID NO:141所示的氨基酸序列；
- [0091] 或
- [0092] 重链包含SEQ ID:146所示的氨基酸序列；
- [0093] 轻链包含SEQ ID NO:145所示的氨基酸序列；
- [0094] 或
- [0095] 重链包含SEQ ID:160所示的氨基酸序列；
- [0096] 轻链包含SEQ ID NO:159所示的氨基酸序列；
- [0097] 或
- [0098] 重链包含SEQ ID:164所示的氨基酸序列；
- [0099] 轻链包含SEQ ID NO:163所示的氨基酸序列；
- [0100] 或
- [0101] 重链包含SEQ ID:170所示的氨基酸序列；
- [0102] 轻链包含SEQ ID NO:169所示的氨基酸序列。
- [0103] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:上述抗体或其抗原结合片段为靶向人SIRP α 蛋白的特异性抗体。
- [0104] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:上述抗体是人源化单克隆抗体。
- [0105] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:抗体轻链恒定结构域衍生自人 κ 轻链恒定结构域；
- [0106] 抗体重链恒定结构域衍生自人IgG1、IgG2、IgG3或IgG4重链恒定结构域。
- [0107] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:用于制备抑制人CD47与人SIRP α 结合,且不与人SIRP γ 特异性结合的药物。
- [0108] 进一步地,本发明提供一种抗体或抗原结合片段,其特征在于:具有如下用途中的一种或多种：
- [0109] A. 用于制备治疗、缓解和抑制癌症及相关疾病的药物；

- [0110] B. 用于制备治疗和缓解感染及相关症状的药物；
- [0111] C. 用于制备治疗免疫调节疾病及相关疾病的药物；
- [0112] D. 用于制备抑制肿瘤生长的药物。
- [0113] 进一步地, 本发明提供的一种抗体或抗原结合片段, 其特征在于: 上述癌症或肿瘤选自下组织或部位: 结直肠、乳腺、卵巢、胰腺、胃、食管、前列腺、肾、宫颈、骨髓癌、淋巴癌、白血病、甲状腺、子宫内膜、子宫、膀胱、神经内分泌、头部颈部、肝、鼻咽、睾丸、小细胞肺癌、非小细胞肺癌、黑色素瘤、基底细胞皮肤癌、鳞状细胞皮肤癌、隆突性皮肤纤维肉瘤、梅克尔细胞癌、成胶质细胞瘤、胶质瘤、肉瘤、间皮瘤, 和骨髓增生异常综合症。
- [0114] 进一步地, 本发明提供的一种抗体或抗原结合片段, 其特征在于:
- [0115] A-D项所述药物的剂型为经胃肠道以外给药途径剂型;
- [0116] A-D项所述药物中抗体或抗原结合片段的含量为0.1-100mg/kg。

附图说明

- [0117] 图1-1至图1-31为人源化SIRPa抗体活性鉴定结果。
- [0118] 图2-1至图2-7为ELISA检测结果。
- [0119] 图3-1至图3-2为抗SIRPa抗体体外功能实验ADCP结果。
- [0120] 图4为各组肿瘤成像信号值反应的肿瘤生长曲线及D18成像信号强度结果图。
- [0121] 图5为各组生存曲线。

具体实施方式

[0122] 本实验中未注明具体条件的实验方法, 通常是按照常规条件, 或按照原料或商品制造厂商所建议的条件。如分子克隆, 实验室手册, 冷泉港实验室, 当代分子生物学方法, 细胞生物学等等。未注明具体来源的试剂, 为市场购买的常规试剂。

[0123] 实施例1: 获得抗SIRPa小鼠抗体

[0124] 小鼠免疫: 抗人SIRPa单克隆抗体通过免疫小鼠产生。实验用Balb/c白小鼠, 雌性, 6周龄。饲养环境: SPF级。小鼠购进后, 实验室环境饲养1周, 12/12小时光/暗周期调节, 温度20-25℃; 湿度40-60%。免疫Balb/c小鼠, 首次用弗式完全佐剂(CFA)免疫重组蛋白QP009(SIRPa, 序列如下所示) 50ug/只小鼠两周后, 此后用QP009(SIRPa-FC)加弗式不完全佐剂(IFA)或者QP009(SIRPa)加铝盐Alum+CpGODN1826交替免疫, 25ug/只小鼠, 一周一次。

[0125] QP009(SIRPa)氨基酸序列如下所示:

[0126] EEELQVIQPKSVLVAAGETATLRCTVTSVIPVGPQWFRGAGPGRELIYNQKEGHFPRVTTVSDSTK
RNNMDFSIRIGNITPADAG TYYCVKFRKGSPPDVEFKSGAGTELSVRAKPSDYKDDDDKHHHHH

[0127] 细胞融合: 选择血清中抗体滴度高的小鼠进行脾细胞融合。融合前72小时, 腹腔注射冲刺免疫所选小鼠。采用优化的PEG介导的融合步骤将脾淋巴细胞与骨髓瘤Sp2/0细胞进行融合得到杂交瘤细胞。融合好的杂交瘤细胞用HAT完全培养基(含20%FBS、1×HAT和1×OPI的IMDM培养基)重悬, 分装于96孔细胞培养板中(1×10⁵个/150u1/孔), 37℃、5%CO₂培养。融合后的第5天加入20%FBS的IMDM培养基(含2×HAT和1×OPI), 50u1/孔, 37℃, 5%CO₂培养。融合后第7天~8天, 根据细胞生长密度, 全换液, 培养基为HT完全培养基(含20%FBS、1×HT和1×OPI的IMDM培养基), 250u1/孔, 37℃、5%CO₂培养。

[0128] 杂交瘤细胞筛选:根据细胞生长密度,融合后第10-14天,进行ELISA检测筛选杂交瘤上清中抗SIRPa 抗体。取杂交瘤融合孔上清通过ELISA进行96孔板整板初筛,检测上清中抗SIRPa抗体能阻断SIRPa/CD47 的结合,即为初筛阳性孔。再取初筛阳性孔上清ELISA检测与QP009 (SIRPa-FC) 的结合,选取结合SIRPa 且能阻断SIRPa/CD47结合均为阳性的克隆,即为抗SIRPa抗体阳性克隆孔。将阳性克隆扩培并及时转移至24/6孔板中,通过ELISA再次检测细胞培养上清结合SIRPa且能阻断SIRPa/CD47的结合均为阳性的克隆孔,即为抗SIRPa抗体阳性克隆孔。筛选部分结果见表1。将阳性克隆进行2-3轮有限稀释至单细胞克隆,冻存所有阳性单细胞株,包括克隆71C10。

[0129] 表1:结合和阻断ELISA筛选杂交瘤阳性克隆。

杂交瘤克隆号	Clone#	Blocking	Binding
51B1	51B1-1	0.21	2.54
	51B1-4	0.09	2.50
54F2	54F2-3	0.08	2.50
	54F2-4	0.07	2.56
57B4	57B4-1	0.13	2.66
	57B4-2	0.08	2.47
71C10	71C10-3	0.10	2.28
	71C10-4	0.06	2.34
76D10	76D10-2	0.04	2.69
	76D10-3	0.04	2.61

[0131] 杂交瘤单抗测序获得抗体序列:取杂交瘤阳性单克隆细胞株71C10提取mRNA,mRNA反转录成cDNA,以cDNA为模板PCR扩增,挑选PCR阳性克隆送测序,通过序列分析得到71C10单克隆抗体轻重链可变区序列。

[0132] 实施例2:抗SIRPa嵌合抗体SPR检测亲和力

[0133] 1. 抗原及嵌合抗体分子克隆设计见下表

[0134]

蛋白编号	质粒编号	序列编号	描述
QP026027	QD026	SEQ ID NO:01	pQDK-KWAR23-L
	QD027	SEQ ID NO:02	pQDH-KWAR23-H
QP026249	QD026	SEQ ID NO:01	pQDK-KWAR23-L
	QD249	SEQ ID NO:03	pQDH-KWAR23-H(IgG4)(QD027)
QP141142	QD141	SEQ ID NO:04	pQDK-180109 VL
	QD142	SEQ ID NO:05	pQDH-180109 VH
QP141238	QD141	SEQ ID NO:04	pQDK-180109 VL
	QD238	SEQ ID NO:06	pQDH-180109 VH (IgG4)(QD142)
QP145146	QD145	SEQ ID NO:07	pQDK-180111 VL
	QD146	SEQ ID NO:08	pQDH-180111 VH
QP145239	QD145	SEQ ID NO:07	pQDK-180111 VL
	QD239	SEQ ID NO:09	pQDH-180111 VH (IgG4)(QD146)
QP159160	QD159	SEQ ID NO:10	pQDK-180120 VL
	QD160	SEQ ID NO:11	pQDH-180120 VH
QP159240	QD159	SEQ ID NO:10	pQDK-180120 VL
	QD240	SEQ ID NO:12	pQDH-180120 VH (IgG4)(QD160)
QP163164	QD163	SEQ ID NO:13	pQDK-180122 VL
	QD164	SEQ ID NO:14	pQDH-180122 VH
QP163245	QD163	SEQ ID NO:13	pQDK-180122 VL
	QD245	SEQ ID NO:15	pQDH-180122 VH (IgG4)(QD164)
QP169170	QD169	SEQ ID NO:16	pQDK-180126 VL
	QD170	SEQ ID NO:17	pQDH-180126 VH
QP169246	QD169	SEQ ID NO:16	pQDK-180126 VL
	QD246	SEQ ID NO:18	pQDH-180126 VH (IgG4)(QD170)

蛋白编号	重链质粒编号	序列编号	描述
QP001	QD001	SEQ ID NO:114	pQD-CD47-FC
QP002	QD002	SEQ ID NO:115	pQD-SIPRa-FC
QP009	QD009	SEQ ID NO:116	pQD-SIPRa-flag-his(A27V,L66S)
QP093	QD093	SEQ ID NO:117	pQD-human SIRPa V1 ECD(E31-R370)-mFC(IgG2a)
QP094	QD094	SEQ ID NO:118	pQD-human SIRPa V1 ECD(E31-R370)-flag-his
QP095	QD095	SEQ ID NO:119	pQD-human SIRPa V2 ECD(E31-R370)-mFC(IgG2a)
QP096	QD096	SEQ ID NO:120	pQD-human SIRPa V2 ECD(E31-R370)-flag-his
QP097	QD097	SEQ ID NO:121	pQD-MACFA SIRPa(I7G9Z7) ECD(E31-R369)-mFC(IgG2a)
QP098	QD098	SEQ ID NO:122	pQD-MACFA SIRPa(I7G9Z7) ECD(E31-R369)-flag-his
QP099	QD099	SEQ ID NO:123	pQD-MACFA SIRPa(G7PGS8) ECD(E29-R368)-mFC(IgG2a)
QP100	QD100	SEQ ID NO:124	pQD-MACFA SIRPa(G7PGS8) ECD(E29-R368)-flag-his
QP271	QD271	SEQ ID NO:125	pQD-cynoSIRPa1-flag-his T-557-28
QP272	QD272	SEQ ID NO:126	pQD-cynoSIRPa1-mFC T-557-28
QP273	QD273	SEQ ID NO:127	pQD-cynoSIRPa2-flag-his T-557-14
QP274	QD274	SEQ ID NO:128	pQD-cynoSIRPa2-mFC T-557-14

[0135] 2. 抗原及嵌合抗体表达,纯化

[0136] 293E细胞培养密度维持在 $0.2-3 \times 10^6/\text{ml}$ 之间,维护阶段培养基(GIBCO Freestyle 293 expression medium)进行培养,转染前一天待转染细胞离心换液,调整细胞密度为 $0.5-0.8 \times 10^6/\text{ml}$ 。转染当天,293E细胞密度为 $1-1.5 \times 10^6/\text{ml}$ 。准备质粒和转染试剂PEI,需转染质粒量为 $100\text{ug}/100\text{ml}$ 细胞,使用PEI和质粒的质量比为2:1。将质粒和PEI进行混匀,静置15min,不宜超过20min。将质粒和PEI混合物缓慢加入293E的细胞中,放入8%CO₂,120rpm,37℃的摇床中培养,转染第五天,水平离心机4700rpm离心20min收集细胞上清。

[0137] Protein A亲和层析纯化

[0138] 用平衡液过柱,至少3CV,实际体积20ml,确保最终仪器中流出的溶液pH和电导与平衡液一致,流速1ml/min;将离心后培养液上清过柱,上样40ml,流速0.33ml/min;用平衡液过柱,至少3CV,实际体积20ml,确保最终仪器中流出的溶液pH和电导与平衡液一致,流速0.33ml/min;用洗脱液过柱,UV280上升至15mAU时开始收集洗脱峰(PAC-EP),UV280下降至15mAU时停止收集,流速1ml/min。样品收集完成后,用pH调节液将PAC-EP调至中性。

[0139] 3. 表面等离子体共振 (SPR) 检测亲和力

[0140] 通过Biacore T200 (GE) 测定抗SIRPa嵌合抗体与SIRPaV1及SIRPaV2亲和力如下表所示:

编号	SIRPa V1(QP094)				SIRPa V2(QP096)			
	ka (1/Ms)	kd (1/s)	KD (M)	V1排名	ka (1/Ms)	kd (1/s)	KD (M)	V2排名
QP163164	2.71E+06	1.43E-03	5.27E-10	4	3.39E+06	2.30E-03	6.78E-10	1
QP159160	8.69E+05	2.15E-03	2.48E-09	5	3.72E+06	3.11E-01	8.35E-08	6
QP169170	6.73E+05	3.05E-04	4.53E-10	2	6.25E+05	1.09E-02	1.74E-08	4
QP145146	1.59E+06	5.88E-04	3.71E-10	1	5.88E+06	2.38E-01	4.04E-08	5
QP141142	2.10E+06	1.09E-03	5.18E-10	3	1.70E+06	1.59E-02	9.32E-09	2
QP026027	9.08E+05	4.65E-03	5.12E-09	6	2.01E+06	2.46E-02	1.23E-08	3

[0142] 通过biacore测定嵌合抗体与cynoSIRPaV1及SIRPg亲和力如下表所示:

编号	cyno SIRPA(QP100)			SIRPG(sinobiological)		
	ka (1/Ms)	kd (1/s)	KD (M)	ka (1/Ms)	kd (1/s)	KD (M)
QP163164	1.99E+06	2.63E-01	1.32E-07	2.16E+05	1.08E-03	5.00E-09
QP159160				1.98E+06	3.19E-03	1.61E-09
QP169170	9.71E+05	2.11E-02	2.17E-08	1.25E+06	2.06E-03	1.65E-09
QP145146	5.86E+06	4.24E-01	7.22E-08	2.98E+06	4.14E-03	1.39E-09
QP141142				3.14E+06	3.18E-03	1.01E-09
QP026027	3.13E+06	1.99E-02	6.35E-09	5.16E+06	1.53E-02	2.96E-09

[0144] 实施例3:抗SIRPa杂交瘤单克隆抗体的人源化

[0145] 通过比对IMGT人类抗体重轻链可变区种系基因数据库和MOE软件,分别挑选与QP141142、QP145146、QP159160、QP163164、QP169170同源性高的重轻链可变区种系基因作为模板,将鼠源抗体的CDR分别移植到相应的人源模板中,形成次序为FR1-CDR1-FR2-CDR2-FR3-CDR3-FR4的可变区序列。再选择一些重要的氨基酸残基做回复突变组合。其中氨基酸残基由Kabat编号系统确定并注释。

[0146] 1. 抗SIRPa抗体人源化分子克隆

[0147] 设计引物PCR搭建各人源化抗体VH/VK基因片段,再与表达载体pQD(带信号肽及恒定区基因(CH1-FC/CL)片段)进行同源重组,构建抗体全长表达载体VH-CH1-FC-pQD/VK-CL-pQD。

[0148] 利用在线软件DNAWorks(v3.2.2)(<http://helixweb.nih.gov/dnaworks/>)设计多条引物合成VH/VK含重组所需基因片段:5'-30bp信号肽+VH/VK+30bpCH1/CL-3'。按照TaKaRa公司PrimerSTARXL DNA聚合酶操作说明书,用上面设计的多条引物,分两步PCR扩增得到VH/VK含重组所需基因片段。表达载体pQD(带信号肽及恒定区基因(CH1-FC/CL)片段)构建及酶切,利用一些特殊的限制性内切酶,如BsmBI,识别序列与酶切位点不同的特性设计构建表达载体pQD(带信号肽及恒定区基因(CH1-FC/CL)片段)。BsmBI酶切载体,切胶回收备用。重组构建表达载体VH-CH1-FC-pQD/VK-CL-pQD。VH/VK含重组所需基因片段与BsmBI酶切回收表达载体pQD(带信号肽及恒定区基因(CH1-FC/CL)片段)按3:1比例分别加入DH5H感受态细胞中,0℃冰浴30min,42℃热击90s,加入5倍体积LB介质,37℃孵育45min,涂布LB-Amp平板,37℃培养过夜,挑取单克隆送测序得到各目的克隆。

[0149] 各克隆人源化设计轻重链可变区序列及蛋白表达编号如下所示,此表中所有抗体轻链采用kappa轻链恒定区CL,抗体重链采用人IgG4恒定区:

[0150]

蛋白编号	重链质粒编号	序列编号	描述	轻链质粒编号	序列编号	描述
QP213216	QD216	SEQ ID NO:22	pQDH-142_VH.1	QD213	SEQ ID NO:19	pQDK-142_VL.1
QP214216	QD216	SEQ ID NO:22	pQDH-142_VH.1	QD214	SEQ ID NO:20	pQDK-142_VL.1A
QP215216	QD216	SEQ ID NO:22	pQDH-142_VH.1	QD215	SEQ ID NO:21	pQDK-142_VL.1B
QP213217	QD217	SEQ ID NO:23	pQDH-142_VH.1A	QD213	SEQ ID NO:19	pQDK-142_VL.1
QP214217	QD217	SEQ ID NO:23	pQDH-142_VH.1A	QD214	SEQ ID NO:20	pQDK-142_VL.1A
QP215217	QD217	SEQ ID NO:23	pQDH-142_VH.1A	QD215	SEQ ID NO:21	pQDK-142_VL.1B
QP213218	QD218	SEQ ID NO:24	pQDH-142_VH.1B	QD213	SEQ ID NO:19	pQDK-142_VL.1
QP214218	QD218	SEQ ID NO:24	pQDH-142_VH.1B	QD214	SEQ ID NO:20	pQDK-142_VL.1A
QP215218	QD218	SEQ ID NO:24	pQDH-142_VH.1B	QD215	SEQ ID NO:21	pQDK-142_VL.1B
QP213219	QD219	SEQ ID NO:25	pQDH-142_VH.1C	QD213	SEQ ID NO:19	pQDK-142_VL.1
QP214219	QD219	SEQ ID NO:25	pQDH-142_VH.1C	QD214	SEQ ID NO:20	pQDK-142_VL.1A
QP215219	QD219	SEQ ID NO:25	pQDH-142_VH.1C	QD215	SEQ ID NO:21	pQDK-142_VL.1B
QP213220	QD220	SEQ ID NO:26	pQDH-142_VH.1D	QD213	SEQ ID NO:19	pQDK-142_VL.1
QP214220	QD220	SEQ ID NO:26	pQDH-142_VH.1D	QD214	SEQ ID NO:20	pQDK-142_VL.1A
QP215220	QD220	SEQ ID NO:26	pQDH-142_VH.1D	QD215	SEQ ID NO:21	pQDK-142_VL.1B
蛋白编号	重链质粒编号	序列编号	描述	轻链质粒编号	序列编号	描述
QP231234.1	QD234	SEQ ID NO:29	pQDH-146_VH.1 (IgG4)	QD231	SEQ ID NO:169	pQDK-146_VL.1
QP232234.1	QD234	SEQ ID NO:29	pQDH-146_VH.1 (IgG4)	QD232	SEQ ID NO:170	pQDK-146_VL.1A
QP233234.1	QD234	SEQ ID NO:29	pQDH-146_VH.1 (IgG4)	QD233	SEQ ID NO:171	pQDK-146_VL.1B
QP231235.1	QD235	SEQ ID NO:30	pQDH-146_VH.1A (IgG4)	QD231	SEQ ID NO:169	pQDK-146_VL.1
QP232235.1	QD235	SEQ ID NO:30	pQDH-146_VH.1A (IgG4)	QD232	SEQ ID NO:170	pQDK-146_VL.1A
QP233235.1	QD235	SEQ ID NO:30	pQDH-146_VH.1A (IgG4)	QD233	SEQ ID NO:171	pQDK-146_VL.1B
QP231236.1	QD236	SEQ ID NO:31	pQDH-146_VH.1B (IgG4)	QD231	SEQ ID NO:169	pQDK-146_VL.1
QP232236.1	QD236	SEQ ID NO:31	pQDH-146_VH.1B (IgG4)	QD232	SEQ ID NO:170	pQDK-146_VL.1A
QP233236.1	QD236	SEQ ID NO:31	pQDH-146_VH.1B (IgG4)	QD233	SEQ ID NO:171	pQDK-146_VL.1B
QP231237.1	QD237	SEQ ID NO:32	pQDH-146_VH.1C (IgG4)	QD231	SEQ ID NO:169	pQDK-146_VL.1
QP232237.1	QD237	SEQ ID NO:32	pQDH-146_VH.1C (IgG4)	QD232	SEQ ID NO:170	pQDK-146_VL.1A
QP233237.1	QD237	SEQ ID NO:32	pQDH-146_VH.1C (IgG4)	QD233	SEQ ID NO:171	pQDK-146_VL.1B
蛋白编号	重链质粒编号	序列编号	描述	轻链质粒编号	序列编号	描述
QP222225.1	QD225	SEQ ID NO:36	pQDH-160_VH.1 (IgG4)	QD222	SEQ ID NO:33	pQDK-160_VL.1
QP223225.1	QD225	SEQ ID NO:36	pQDH-160_VH.1 (IgG4)	QD223	SEQ ID NO:34	pQDK-160_VL.1A
QP224225.1	QD225	SEQ ID NO:36	pQDH-160_VH.1 (IgG4)	QD224	SEQ ID NO:35	pQDK-160_VL.1B
QP222226.1	QD226	SEQ ID NO:37	pQDH-160_VH.1A (IgG4)	QD222	SEQ ID NO:33	pQDK-160_VL.1
QP223226.1	QD226	SEQ ID NO:37	pQDH-160_VH.1A (IgG4)	QD223	SEQ ID NO:34	pQDK-160_VL.1A
QP224226.1	QD226	SEQ ID NO:37	pQDH-160_VH.1A (IgG4)	QD224	SEQ ID NO:35	pQDK-160_VL.1B
QP222227.1	QD227	SEQ ID NO:38	pQDH-160_VH.1B (IgG4)	QD222	SEQ ID NO:33	pQDK-160_VL.1
QP223227.1	QD227	SEQ ID NO:38	pQDH-160_VH.1B (IgG4)	QD223	SEQ ID NO:34	pQDK-160_VL.1A
QP224227.1	QD227	SEQ ID NO:38	pQDH-160_VH.1B (IgG4)	QD224	SEQ ID NO:35	pQDK-160_VL.1B
QP222228.1	QD228	SEQ ID NO:39	pQDH-160_VH.1C (IgG4)	QD222	SEQ ID NO:33	pQDK-160_VL.1
QP223228.1	QD228	SEQ ID NO:39	pQDH-160_VH.1C (IgG4)	QD223	SEQ ID NO:34	pQDK-160_VL.1A
QP224228.1	QD228	SEQ ID NO:39	pQDH-160_VH.1C (IgG4)	QD224	SEQ ID NO:35	pQDK-160_VL.1B
蛋白编号	重链质粒编号	序列编号	描述	轻链质粒编号	序列编号	描述
QP252254	QD254	SEQ ID NO:42	pQDH(IgG4)-164_VH.1	QD252	SEQ ID NO:40	pHrK-164_VL.1
QP253254	QD254	SEQ ID NO:42	pQDH(IgG4)-164_VH.1	QD253	SEQ ID NO:41	pHrK-164_VL.1A
QP252255	QD255	SEQ ID NO:43	pQDH(IgG4)-164_VH.1A	QD252	SEQ ID NO:40	pHrK-164_VL.1
QP253255	QD255	SEQ ID NO:43	pQDH(IgG4)-164_VH.1A	QD253	SEQ ID NO:41	pHrK-164_VL.1A
QP252256	QD256	SEQ ID NO:44	pQDH(IgG4)-164_VH.1B	QD252	SEQ ID NO:40	pHrK-164_VL.1
QP253256	QD256	SEQ ID NO:44	pQDH(IgG4)-164_VH.1B	QD253	SEQ ID NO:41	pHrK-164_VL.1A
QP252257	QD257	SEQ ID NO:45	pQDH(IgG4)-164_VH.1C	QD252	SEQ ID NO:40	pHrK-164_VL.1
QP253257	QD257	SEQ ID NO:45	pQDH(IgG4)-164_VH.1C	QD253	SEQ ID NO:41	pHrK-164_VL.1A
QP252258	QD258	SEQ ID NO:46	pQDH(IgG4)-164_VH.1D	QD252	SEQ ID NO:40	pHrK-164_VL.1
QP253258	QD258	SEQ ID NO:46	pQDH(IgG4)-164_VH.1D	QD253	SEQ ID NO:41	pHrK-164_VL.1A
蛋白编号	重链质粒编号	序列编号	描述	轻链质粒编号	序列编号	描述
QP14301427	QD1430	SEQ ID NO:50	IgG4	QD1427	SEQ ID NO:47	K
QP14301428	QD1430	SEQ ID NO:50	IgG4	QD1428	SEQ ID NO:48	K
QP14301429	QD1430	SEQ ID NO:50	IgG4	QD1429	SEQ ID NO:49	K
QP14311427	QD1431	SEQ ID NO:51	IgG4	QD1427	SEQ ID NO:47	K
QP14311428	QD1431	SEQ ID NO:51	IgG4	QD1428	SEQ ID NO:48	K
QP14311429	QD1431	SEQ ID NO:51	IgG4	QD1429	SEQ ID NO:49	K
QP14321427	QD1432	SEQ ID NO:52	IgG4	QD1427	SEQ ID NO:47	K
QP14321428	QD1432	SEQ ID NO:52	IgG4	QD1428	SEQ ID NO:48	K
QP14321429	QD1432	SEQ ID NO:52	IgG4	QD1429	SEQ ID NO:49	K

[0152] 2. 抗SIRPa抗体人源化蛋白表达

[0153] 293E细胞培养密度维持在 $0.2-3 \times 10^6$ /ml之间,维护阶段培养基(GIBCOFreestyle 293 expression medium)进行培养,转染前一天待转染细胞离心换液,调整细胞密度为 $0.5-0.8 \times 10^6$ /ml。转染当天,293E 细胞密度为 $1-1.5 \times 10^6$ /ml。准备质粒和转染试剂PEI,需转染质粒量为100ug/100ml细胞,使用PEI 和质粒的质量比为2:1。将质粒和PEI进行混匀,静置15min,不宜超过20min。将质粒和PEI混合物缓慢加入293E的细胞中,放入8%CO₂,120rpm,37°C的摇床中培养,转染第五天,水平离心机4700rpm离心20min收集细胞上清。

[0154] 3. 抗SIRPa抗体人源化蛋白纯化

[0155] ProteinA亲和层析纯化

[0156] 用平衡液过柱,至少3CV,实际体积20ml,确保最终仪器中流出的溶液pH和电导与

平衡液一致,流速1ml/min;将离心后培养液上清过柱,上样40ml,流速0.33ml/min;用平衡液过柱,至少 3CV,实际体积20ml,确保最终仪器中流出的溶液pH和电导与平衡液一致,流速0.33ml/min;用洗脱液过柱,UV280上升至15mAU时开始收集洗脱峰(PAC-EP),UV280下降至15mAU时停止收集,流速1ml/min。样品收集完成后,用pH调节液将PAC-EP调至中性。

[0157] 4. 人源化SIRPa抗体活性鉴定(Binding-ELISA)

[0158] Binding-ELISA实验方法:分别包被QP094(SIRPaV1-flag-his)、QP096(SIRPaV2-Flag-his)、QP098(cynoSIRPa-flag-his)、QP100(cynoSIRPa-flag-his) 0.5ug/ml,50ul/孔,4度过夜。PBS洗3遍,3%BSA/PBS200ul/孔,RT孵育2h;PBST洗3遍;加入不同浓度的抗体,RT孵育1h,PBST洗3遍,PBS洗3遍;孵育二抗HRP-anti Fab1:2500稀释,RT孵育1h,PBST洗3遍,PBS洗3遍,TMB显示,2M的 H₂SO₄终止,450nm读数。结果如图1-1至1-31所示。

[0159] 5. 人源化SIRPa抗体SPR鉴定亲和力

[0160] 通过biacore测定人源化抗体与SIRPaV1及SIRPaV2及cynoSIRPa亲和力如下表所示:

编号	QP094 (humanSIRPaV1)			QP096 (humanSIRPaV2)			QP100 (cynoSIRPa)		
	ka (1/Ms)	kd (1/s)	KD (M)	ka (1/Ms)	kd (1/s)	KD (M)	ka (1/Ms)	kd (1/s)	KD (M)
QP253255	2.82E+06	1.60E-03	5.66E-10	4.55E+06	3.18E-03	6.99E-10	1.89E+06	2.41E-01	1.28E-07
QP252256	1.83E+06	1.11E-03	6.07E-10	2.67E+06	1.66E-03	6.22E-10	3.92E+06	4.11E-01	1.05E-07
[0161] QP253256	2.35E+06	7.90E-04	3.36E-10	3.42E+06	1.09E-03	3.19E-10	2.52E+06	1.96E-01	7.79E-08
QP252257	2.07E+06	1.61E-03	7.75E-10	2.81E+06	2.35E-03	8.36E-10	2.14E+06	2.88E-01	1.34E-07
QP253257	2.54E+06	9.83E-04	3.87E-10	4.50E+06	1.58E-03	3.52E-10	2.30E+06	2.05E-01	8.91E-08
QP252258	1.87E+06	2.01E-03	1.08E-09	2.84E+06	3.34E-03	1.18E-09	1.91E+06	1.77E-01	9.26E-08
QP253258	2.72E+06	1.29E-03	4.74E-10	4.32E+06	2.17E-03	5.01E-10	8.38E+08	9.23E+01	1.10E-07
QP163245	2.72E+06	1.26E-03	4.63E-10	3.35E+06	2.06E-03	6.16E-10	2.17E+06	2.17E-01	1.00E-07

[0162] 实施例4:抗SIRPa抗体QP159160亲和力成熟

[0163] 1. 构建人源化噬菌粒载体

[0164] 人源化后的QP253256分别以scFv模式(VH-3个GGGS-VL)构建到噬菌粒载体中,作为野生型序列(即相对于亲和力成熟筛选得到的突变序列,作为原始或起始序列)。利用重叠PCR(over-lapPCR)拼接VH、(GGGS)3接头、VL,采用NcoI和NotI酶切位点接入噬菌粒载体。

[0165] 2. 构建噬菌体展示文库

[0166] 利用构建好的野生型scFv为模板,采用基于密码子的(codon-based)引物,在引物合成过程中,突变区域每个密码子都有50%野生型的密码子和50%的NNK(反向引物为MNN)在所有CDR区引入突变构建突变文库。PCR片段经过NcoI和NotI酶切,连接到噬菌粒载体中,最后电转化大肠杆菌TG1。每条基于密码子的引物建立一个独立的文库。

[0167] 3. 文库淘筛

[0168] 文库经过拯救包装出淘筛用的噬菌体颗粒后,利用生物素化的QP098(cynoSIRPa(ECD))抗原和链霉亲和素磁珠进行液相法淘筛,并且每一轮筛选相对于上一轮都降低抗原浓度。三轮淘筛之后,挑取250 克隆进行噬菌体ELISA检测结合活性,阳性克隆进行测序。得到序列如下表所示:

[0169] QP159160亲和力和成熟

蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
QP02231394	QD1394	SEQ ID NO:81	QD223	SEQ ID NO:34
QP02231395	QD1395	SEQ ID NO:82	QD223	SEQ ID NO:34
QP02231396	QD1396	SEQ ID NO:83	QD223	SEQ ID NO:34
QP02231397	QD1397	SEQ ID NO:84	QD223	SEQ ID NO:34
QP02231398	QD1398	SEQ ID NO:85	QD223	SEQ ID NO:34
QP02231399	QD1399	SEQ ID NO:86	QD223	SEQ ID NO:34
QP02231400	QD1400	SEQ ID NO:87	QD223	SEQ ID NO:34
QP02231401	QD1401	SEQ ID NO:88	QD223	SEQ ID NO:34
QP02231402	QD1402	SEQ ID NO:89	QD223	SEQ ID NO:34
QP02231403	QD1403	SEQ ID NO:90	QD223	SEQ ID NO:34
QP02231404	QD1404	SEQ ID NO:91	QD223	SEQ ID NO:34
QP02231405	QD1405	SEQ ID NO:92	QD223	SEQ ID NO:34
QP02231406	QD1406	SEQ ID NO:93	QD223	SEQ ID NO:34
QP02231407	QD1407	SEQ ID NO:94	QD223	SEQ ID NO:34
QP02231408	QD1408	SEQ ID NO:95	QD223	SEQ ID NO:34
QP02231409	QD1409	SEQ ID NO:96	QD223	SEQ ID NO:34

[0170] QP159160亲和力和成熟

蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
QP02261410	QD226	SEQ ID NO:37	QD1410	SEQ ID NO:97
QP02261411	QD226	SEQ ID NO:37	QD1411	SEQ ID NO:98
QP02261412	QD226	SEQ ID NO:37	QD1412	SEQ ID NO:99
QP02261413	QD226	SEQ ID NO:37	QD1413	SEQ ID NO:100
QP02261414	QD226	SEQ ID NO:37	QD1414	SEQ ID NO:101
QP02261415	QD226	SEQ ID NO:37	QD1415	SEQ ID NO:102
QP02261416	QD226	SEQ ID NO:37	QD1416	SEQ ID NO:103
QP02261417	QD226	SEQ ID NO:37	QD1417	SEQ ID NO:104
QP02261418	QD226	SEQ ID NO:37	QD1418	SEQ ID NO:105
QP02261419	QD226	SEQ ID NO:37	QD1419	SEQ ID NO:106
QP02261420	QD226	SEQ ID NO:37	QD1420	SEQ ID NO:107
QP02261421	QD226	SEQ ID NO:37	QD1421	SEQ ID NO:108
QP02261422	QD226	SEQ ID NO:37	QD1422	SEQ ID NO:109
QP02261423	QD226	SEQ ID NO:37	QD1423	SEQ ID NO:110
QP02261424	QD226	SEQ ID NO:37	QD1424	SEQ ID NO:111
QP02261425	QD226	SEQ ID NO:37	QD1425	SEQ ID NO:112
QP02261426	QD226	SEQ ID NO:37	QD1426	SEQ ID NO:113

[0171] 4. ELISA检测亲和力

[0172] 经过对测序克隆进行比对分析,去除冗余序列之后,将非冗余序列转换成全长IG (hIgG4, κ) 进行哺乳动物细胞表达。亲和纯化之后的全长IG进行ELISA检测。

[0173] Binding-ELISA实验方法:分别包被QP094 (SIRPaV1-flag-his)、QP096 (SIRPaV2-Flag-his)、QP098 (cynoSIRPa-flag-his)、QP100 (cynoSIRPa-flag-his) 0.5ug/ml, 50ul/孔, 4度过夜。PBS洗3遍, 3% BSA/PBS 200ul/孔, RT孵育2h; PBST洗3遍; 加入不同浓度的抗体, RT孵育1h, PBST洗3遍, PBS洗3遍; 孵育二抗HRP-antiFab1:2500稀释, RT孵育1h, PBST洗3遍, PBS洗3遍, TMB显示, 2M的H2SO4终止, 450nm 读数。EC50值如下表所示:

[0174]

蛋白编号	EC50 (ug/ml)			
	QP094	QP096	QP098	QP100
QP13940223	0.08531	1.296	2.788	1.424
QP13950223	0.008112	0.4206	1.775	1.002
QP13960223	0.008647	0.6785	2.058	1.237
QP13970223	0.02677	1.009	2.849	1.385
QP13980223	0.004301	0.0384	0.2085	0.2847
QP13990223	0.06168	1.338	1.634	1.158
QP14000223	0.04137	0.814	0.7059	0.6544
QP14010223	0.01159	0.3314	0.5521	0.4984
QP14020223	0.02932	1.316	4.188	2.042
QP14040223	0.01127	0.77	2.994	1.384
QP159240	0.0111	1.051	2.95	1.338
QP223226	0.0349	1.724	5.997	1.639

蛋白编号	EC50 (ug/ml)			
	QP094	QP096	QP098	QP100
QP14050223	0.005857	0.03992	0.4379	0.3888
QP14060223	0.02226	0.2682	1.298	0.7082
QP14070223	0.04694	0.9201	1.475	0.7852
QP14080223	0.003297	0.1262	1.026	0.5698
QP14090223	0.003668	0.1614	1.057	0.7149
QP02261410	0.004871	0.1954	0.8622	0.7163
QP02261411	0.005251	0.2417	1.237	0.662
QP02261412	0.009756	0.9457	3.075	1.095
QP02261413	0.006222	0.2726	1.495	0.7596
QP02261414	0.0105	0.8134	3.411	1.372
QP159240	0.01648	1.129	3.749	1.7
QP223226	0.04922	2.205	4.408	2.03

[0175]

蛋白编号	EC50 (ug/ml)			
	QP094	QP096	QP098	QP100
QP02261415	0.006152	0.4083	1.882	0.8523
QP14081416	0.002142	0.06061	0.3072	0.3397
QP02261417	0.01025	0.6211	2.777	1.018
QP14081418	0.002616	0.0681	0.346	0.2631
QP02261419	0.01497	0.8595	3.17	1.465
QP14081420	0.002721	0.06819	0.3982	0.3706
QP02261421	0.01295	0.5791	2.838	1.274
QP02261422	0.01624	0.9436	2.836	1.401
QP02261423	0.01335	0.7568	3.049	1.195
QP02261424	0.01131	0.6175	2.546	1.072
QP14081426	0.003512	0.1789	0.9971	0.5704
QP223226	0.01088	0.5543	2.294	1.127

[0176] 实施例5:抗SIRPa抗体QP163164亲和力成熟

[0177] 1. 构建人源化噬菌粒载体

[0178] 人源化后的QP253256分别以scFv模式(VH-3个GGGGS-VL)构建到噬菌粒载体中,作为野生型序列(即相对于亲和力成熟筛选得到的突变序列,作为原始或起始序列)。利用重叠PCR(over-lapPCR)拼接VH、(GGGGS)3接头、VL,采用NcoI和NotI酶切位点接入噬菌粒载体。

[0179] 2. 构建噬菌体展示文库

[0180] 利用构建好的野生型scFv为模板,采用基于密码子的(codon-based)引物,在引物合成过程中,突变区域每个密码子都有50%野生型的密码子和50%的NNK(反向引物为MNN)在所有CDR区引入突变构建突变文库。PCR片段经过NcoI和NotI酶切,连接到噬菌粒载体中,最后电转化大肠杆菌TG1。每条基于密码子的引物建立一个独立的文库。

[0181] 3. 文库淘筛

[0182] 文库经过拯救包装出淘筛用的噬菌体颗粒后,利用生物素化的QP098(cynoSIRPa(ECD))抗原和链霉亲和素磁珠进行液相法淘筛,并且每一轮筛选相对于上一轮都降低抗原浓度。三轮淘筛之后,挑取250 克隆进行噬菌体ELISA检测结合活性,阳性克隆进行测序。得到序列如下表所示:

蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
QP256275	QD256	SEQ ID NO:44	QD275	SEQ ID NO:170
QP256276	QD256	SEQ ID NO:44	QD276	SEQ ID NO:171
QP256277	QD256	SEQ ID NO:44	QD277	SEQ ID NO:172
QP256278	QD256	SEQ ID NO:44	QD278	SEQ ID NO:173
QP256279	QD256	SEQ ID NO:44	QD279	SEQ ID NO:174
QP256280	QD256	SEQ ID NO:44	QD280	SEQ ID NO:175
QP256281	QD256	SEQ ID NO:44	QD281	SEQ ID NO:176
QP256282	QD256	SEQ ID NO:44	QD282	SEQ ID NO:177
QP256283	QD256	SEQ ID NO:44	QD283	SEQ ID NO:178
QP256288	QD256	SEQ ID NO:44	QD288	SEQ ID NO:179
QP256289	QD256	SEQ ID NO:44	QD289	SEQ ID NO:180
QP256290	QD256	SEQ ID NO:44	QD290	SEQ ID NO:181
QP256291	QD256	SEQ ID NO:44	QD291	SEQ ID NO:182
QP2561567	QD256	SEQ ID NO:44	QD1567	SEQ ID NO:53
QP2561568	QD256	SEQ ID NO:44	QD1568	SEQ ID NO:54
QP2561569	QD256	SEQ ID NO:44	QD1569	SEQ ID NO:55
QP2561570	QD256	SEQ ID NO:44	QD1570	SEQ ID NO:56
QP2561571	QD256	SEQ ID NO:44	QD1571	SEQ ID NO:57
QP2561572	QD256	SEQ ID NO:44	QD1572	SEQ ID NO:58
QP2561573	QD256	SEQ ID NO:44	QD1573	SEQ ID NO:59
QP2561574	QD256	SEQ ID NO:44	QD1574	SEQ ID NO:60
QP2561575	QD256	SEQ ID NO:44	QD1575	SEQ ID NO:61
QP2561576	QD256	SEQ ID NO:44	QD1576	SEQ ID NO:62
QP2561577	QD256	SEQ ID NO:44	QD1577	SEQ ID NO:63
QP2561578	QD256	SEQ ID NO:44	QD1578	SEQ ID NO:64
QP2561579	QD256	SEQ ID NO:44	QD1579	SEQ ID NO:65
QP2561580	QD256	SEQ ID NO:44	QD1580	SEQ ID NO:66
QP2561581	QD256	SEQ ID NO:44	QD1581	SEQ ID NO:67
QP2561582	QD256	SEQ ID NO:44	QD1582	SEQ ID NO:68
QP2561583	QD256	SEQ ID NO:44	QD1583	SEQ ID NO:69
QP2561584	QD256	SEQ ID NO:44	QD1584	SEQ ID NO:70
QP2561585	QD256	SEQ ID NO:44	QD1585	SEQ ID NO:71
QP2561586	QD256	SEQ ID NO:44	QD1586	SEQ ID NO:72
QP2561587	QD256	SEQ ID NO:44	QD1587	SEQ ID NO:73
QP2561588	QD256	SEQ ID NO:44	QD1588	SEQ ID NO:74
QP2561589	QD256	SEQ ID NO:44	QD1589	SEQ ID NO:75
QP2561590	QD256	SEQ ID NO:44	QD1590	SEQ ID NO:76
QP2561591	QD256	SEQ ID NO:44	QD1591	SEQ ID NO:77
QP2561592	QD256	SEQ ID NO:44	QD1592	SEQ ID NO:78
QP2561593	QD256	SEQ ID NO:44	QD1593	SEQ ID NO:79
QP2561594	QD256	SEQ ID NO:44	QD1594	SEQ ID NO:80

[0183]

QP163164 亲和成熟

[0184] 4. ELISA检测

[0185] 经过对测序克隆进行比对分析,去除冗余序列之后,将非冗余序列转换成全长IG (hIgG4, κ) 进行哺乳动物细胞表达。亲和纯化之后的全长IG进行ELISA检测。

[0186] Binding-ELISA实验方法(结果如图2-1至图2-6所示):分别包被QP094 (SIRPaV1-flag-his)、QP096 (SIRPaV2-Flag-his)、QP098 (cynoSIRPa-flag-his)、QP100 (cynoSIRPa-flag-his) 0.5ug/ml, 50ul/孔, 4度过夜。PBS洗3遍, 3%BSA/PBS 200ul/孔, RT孵育2h; PBST洗3遍; 加入不同浓度的抗体, RT孵育1h, PBST洗3遍, PBS洗3遍; 孵育二抗HRP-anti Fab1: 2500稀释, RT孵育1h, PBST洗3遍, PBS洗3遍, TMB显示, 2M的H2SO4终止, 450nm读数。EC50值如下表所示:

蛋白编号	EC50(ug/ml)						
	QP094	QP096	SIRPG-his	QP098	QP100	QP271	QP273
QP2561589	0.001366	0.001171	0.001571	0.001037	0.002009	0.0009365	0.001429
QP256291	0.001859	0.001429	0.001335	0.001495	0.001178	0.001173	0.001618
QP2561586	0.001046	0.001108	0.00172	0.001106	0.001235	0.0009672	0.001027
QP2561581	0.001075	0.0008623	0.002085	0.0007556	0.0007578	0.0005554	0.0009209
QP2561594	0.001115	0.001055	0.002468	0.0003074	0.0009833	0.0008066	0.002348
QP256279	0.0006508	0.0006239	0.001261	0.0002759	0.0005584	0.0006008	0.0007207
QP2561770	0.001615	0.001363	0.001632	0.001083	0.001005	0.001207	0.001675
QP2561771	0.001145	0.001127	0.001638	0.001021	0.001128	0.001127	0.001217
QP256253	0.001189	0.001185	0.00441	0.00086	0.00172	0.0009472	0.001514
QP163245	0.001106	0.001235	0.01087	0.0001777	0.001166	0.0008822	0.0016
QP026249	0.005285	0.003311	0.002244	0.02334	0.001925	0.00193	0.002028

[0188] Blocking-ELISA实验方法(结果如图2-7所示): coat QP001.22ug/ml, 4度过夜, PBS洗3遍, 5% milk 250ul/孔封闭, 孵育Biotin-QP0020.05ug/ml+Abs 50ug/ml 1:1混合, 25度孵育1h, HRP-Streptavidin(1:5000)。

[0189] 5. 表面等离子体共振 (SPR) 检测亲合力

[0190] 经过对测序克隆进行比对分析, 去除冗余序列之后, 将非冗余序列转换成全长IG (hIgG4, κ) 进行哺乳动物细胞表达。亲和纯化之后的全长IG采用BIAcore™ X-100 instrument (GE Life Sciences) 进行亲和力测定。

[0191] 结果如下表所示:

	蛋白	Biacore (KD/M)					
		QP094 (human SIRPaV1)	QP096 (human SIRPaV2)	QPP08 (human SIRPg)	QP098 (cyno SIRPa1)	QP271 (cyno SIRPa2)	QP273 (cyno SIRPa3)
亲和力成熟抗体	QP2561589	8.50E-11	3.92E-11	非正常峰, 无KD	6.03E-09	2.41E-09	3.20E-09
	QP2561586	5.97E-11	8.91E-11	非正常峰, 无KD	4.22E-09	1.74E-09	2.22E-09
	QP2561581	1.37E-10	1.76E-10	非正常峰, 无KD	/	/	/
	QP256279	3.54E-11	4.46E-11	2.51E-09	1.56E-09	4.41E-10	9.18E-10
	QP2561770	2.88E-11	3.68E-11	4.81E-10	2.56E-10	1.00E-10	1.63E-10
人源化抗体	QP256253	2.60E-10	2.76E-10	非正常峰, 无KD	2.68E-08	7.97E-09	1.27E-08
嵌合抗体	QP163245	3.86E-10	5.58E-10	非正常峰, 无KD	/	/	/
对照KWAR23	QP026249	3.43E-09	1.36E-08	2.27E-09	2.71E-08	/	/

[0193] 结论: 亲和力成熟抗体QP2561589, QP2561586, QP256279蛋白对humanSIRPa V1/V2亲和力比对照抗体 KWAR23的高50倍以上。其中候选抗体QP256279的SIRPa/SIRPg亲和力比值为56倍, 对照抗体KWAR23比值小于1: 对cynoSIRPa都有结合。

[0194] 实施例6: 抗SIRPa抗体体外功能实验ADCP

[0195] 1. 将抗SIRPa抗体做成不同IgG亚型, 分子克隆设计如下:

[0196]

	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	QP256279不同亚型	lgG1	QP32240279	QD3224	SEQ ID NO:129	QD279
lgG4		QP02560279	QD0256	SEQ ID NO:130	QD279	SEQ ID NO:174
lgG1(N297Q)		QP32250279	QD3225	SEQ ID NO:131	QD279	SEQ ID NO:174
lgG4(N297Q)		QP32260279	QD3226	SEQ ID NO:132	QD279	SEQ ID NO:174
lgG2		QP32550279	QD3255	SEQ ID NO:133	QD279	SEQ ID NO:174
lgG1(L234A,L235A)		QP32600279	QD3260	SEQ ID NO:134	QD279	SEQ ID NO:174
lgG1(L234A,L235A,P329G)		QP32650279	QD3265	SEQ ID NO:135	QD279	SEQ ID NO:174
lgG1(L234A,L235A,G338A)		QP32700279	QD3270	SEQ ID NO:136	QD279	SEQ ID NO:174
lgG1(G236A,G338A)		QP32750279	QD3275	SEQ ID NO:137	QD279	SEQ ID NO:174
QP2561586不同亚型		lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号
	lgG1	QP32241586	QD3224	SEQ ID NO:129	QD1586	SEQ ID NO:72
	lgG4	QP02561586	QD0256	SEQ ID NO:130	QD1586	SEQ ID NO:72
	lgG1(N297Q)	QP32251586	QD3225	SEQ ID NO:131	QD1586	SEQ ID NO:72
	lgG4(N297Q)	QP32261586	QD3226	SEQ ID NO:132	QD1586	SEQ ID NO:72
	lgG2	QP32551586	QD3255	SEQ ID NO:133	QD1586	SEQ ID NO:72
	lgG1(L234A,L235A)	QP32601586	QD3260	SEQ ID NO:134	QD1586	SEQ ID NO:72
	lgG1(L234A,L235A,P329G)	QP32651586	QD3265	SEQ ID NO:135	QD1586	SEQ ID NO:72
	lgG1(L234A,L235A,G338A)	QP32701586	QD3270	SEQ ID NO:136	QD1586	SEQ ID NO:72
	lgG1(G236A,G338A)	QP32751586	QD3275	SEQ ID NO:137	QD1586	SEQ ID NO:72
QP2561589不同亚型	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	lgG1	QP32241589	QD3224	SEQ ID NO:129	QD1589	SEQ ID NO:75
	lgG4	QP02561589	QD0256	SEQ ID NO:130	QD1589	SEQ ID NO:75
	lgG1(N297Q)	QP32251589	QD3225	SEQ ID NO:131	QD1589	SEQ ID NO:75
	lgG4(N297Q)	QP32261589	QD3226	SEQ ID NO:132	QD1589	SEQ ID NO:75
	lgG2	QP32551589	QD3255	SEQ ID NO:133	QD1589	SEQ ID NO:75
	lgG1(L234A,L235A)	QP32601589	QD3260	SEQ ID NO:134	QD1589	SEQ ID NO:75
	lgG1(L234A,L235A,P329G)	QP32651589	QD3265	SEQ ID NO:135	QD1589	SEQ ID NO:75
	lgG1(L234A,L235A,G338A)	QP32701589	QD3270	SEQ ID NO:136	QD1589	SEQ ID NO:75
	lgG1(G236A,G338A)	QP32751589	QD3275	SEQ ID NO:137	QD1589	SEQ ID NO:75
KWAR23不同亚型	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	lgG1	QP00270026	QD027	SEQ ID NO:138	QD026	SEQ ID NO:01
	lgG4	QP02490026	QD249	SEQ ID NO:139	QD026	SEQ ID NO:01
	lgG1(N297Q)	QP3220026	QD3220	SEQ ID NO:140	QD026	SEQ ID NO:01
	lgG4(N297Q)	QP3221026	QD3221	SEQ ID NO:141	QD026	SEQ ID NO:01
	lgG2	QP3253026	QD3253	SEQ ID NO:142	QD026	SEQ ID NO:01
	lgG1(L234A,L235A)	QP3258026	QD3258	SEQ ID NO:143	QD026	SEQ ID NO:01
	lgG1(L234A,L235A,P329G)	QP3263026	QD3263	SEQ ID NO:144	QD026	SEQ ID NO:01
	lgG1(L234A,L235A,G338A)	QP3268026	QD3268	SEQ ID NO:145	QD026	SEQ ID NO:01
	lgG1(G236A,G338A)	QP3273026	QD3273	SEQ ID NO:146	QD026	SEQ ID NO:01
lgG1(L234A,L235A,N297A)	QP3283026	QD3283	SEQ ID NO:147	QD026	SEQ ID NO:01	
Aduro 50A不同亚型	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	lgG1	QP32313240	QD3231	SEQ ID NO:148	QD3240	SEQ ID NO:158
	lgG4	QP32333240	QD3233	SEQ ID NO:149	QD3240	SEQ ID NO:158
	lgG1(N297Q)	QP32353240	QD3235	SEQ ID NO:150	QD3240	SEQ ID NO:158
	lgG4(N297Q)	QP32383240	QD3238	SEQ ID NO:151	QD3240	SEQ ID NO:158
	lgG2	QP32563240	QD3256	SEQ ID NO:152	QD3240	SEQ ID NO:158
	lgG1(L234A,L235A)	QP32613240	QD3261	SEQ ID NO:153	QD3240	SEQ ID NO:158
	lgG1(L234A,L235A,P329G)	QP32663240	QD3266	SEQ ID NO:154	QD3240	SEQ ID NO:158
	lgG1(L234A,L235A,G338A)	QP32713240	QD3271	SEQ ID NO:155	QD3240	SEQ ID NO:158
	lgG1(G236A,G338A)	QP32763240	QD3276	SEQ ID NO:156	QD3240	SEQ ID NO:158
lgG1(L234A,L235A,N297A)	QP32863240	QD3286	SEQ ID NO:157	QD3240	SEQ ID NO:158	

[0197]

	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	QP163164不同亚型	lgG1	QP01630164	QD164	SEQ ID NO:159	QD163
lgG4		QP02450163	QD245	SEQ ID NO:160	QD163	SEQ ID NO:13
lgG1(N297Q)		QP32220163	QD3222	SEQ ID NO:161	QD163	SEQ ID NO:13
lgG4(N297Q)		QP32230163	QD3223	SEQ ID NO:162	QD163	SEQ ID NO:13
lgG2		QP32540163	QD3254	SEQ ID NO:163	QD163	SEQ ID NO:13
lgG1(L234A,L235A)		QP32590163	QD3259	SEQ ID NO:164	QD163	SEQ ID NO:13
lgG1(L234A,L235A,P329G)		QP32640163	QD3264	SEQ ID NO:165	QD163	SEQ ID NO:13
lgG1(L234A,L235A,G338A)		QP32690163	QD3269	SEQ ID NO:166	QD163	SEQ ID NO:13
lgG1(G236A,G338A)		QP32740163	QD3274	SEQ ID NO:167	QD163	SEQ ID NO:13
lgG1(L234A,L235A,N297A)		QP32840163	QD3284	SEQ ID NO:168	QD163	SEQ ID NO:13
QP253256不同亚型	lgG亚型	蛋白编号	重链质粒编号	序列编号	轻链质粒编号	序列编号
	lgG1	QP32240253	QD3224	SEQ ID NO:129	QD253	SEQ ID NO:41
	lgG4	QP02560253	QD0256	SEQ ID NO:130	QD253	SEQ ID NO:41
	lgG1(N297Q)	QP32250253	QD3225	SEQ ID NO:131	QD253	SEQ ID NO:41
	lgG4(N297Q)	QP32260253	QD3226	SEQ ID NO:132	QD253	SEQ ID NO:41
	lgG2	QP32550253	QD3255	SEQ ID NO:133	QD253	SEQ ID NO:41
	lgG1(L234A,L235A)	QP32600253	QD3260	SEQ ID NO:134	QD253	SEQ ID NO:41
	lgG1(L234A,L235A,P329G)	QP32650253	QD3265	SEQ ID NO:135	QD253	SEQ ID NO:41
	lgG1(L234A,L235A,G338A)	QP32700253	QD3270	SEQ ID NO:136	QD253	SEQ ID NO:41
	lgG1(G236A,G338A)	QP32750253	QD3275	SEQ ID NO:137	QD253	SEQ ID NO:41

[0198] 2. 抗SIRPa抗体体外功能实验ADCP

[0199] 准备Macrophage:复苏PBMC,用EasySep™ Human Monocyte Isolation Kit (Stemcell-19359) 分离monocytes,加入Human Recombinant M-CSF(终浓度为50ng/mL),充分混匀;37℃培养细胞6天诱导为Macrophage;收集细胞,计数备用。CFSE标记Raji细胞。将Raji重悬为 2×10^6 cells/ml,然后按 50u1/well (1×10^5 /well) 加入已有巨噬细胞的96孔板中;稀释抗体:将Rituximab用完全培养基稀释为 80ug/ml,再3倍稀释9个梯度,将anti-

SIRP α 用完全培养基稀释为20ug/ml;抗体混合:Combination 组将稀释好的2个抗体1:1混合,Rituximab组用等体积的培养基混合,按50ul/well加入之前铺好的细胞的96孔板中;37℃培养2h;FACS检测:Phagocytosis was measured by gating live CFSE+/CD14+cells.

[0200] 将亲和力成熟分子和对照抗体做了协同Rituximab的ADCPassay,实验结果显示SIRP α 抗体和 Rituximab联用与Rituximab单用相比,EC50变小,ADCP协同效果显著增强。如图3-1至图3-2所示。

[0201] 实施例在B-NDG-hSIRP α 鼠模型中评价抗SIRP α 抗体对Raji-Luc肿瘤生长的抑制作用:

[0202] 为了考察抗SIRP α 抗体对肿瘤的杀伤作用,采用B-NDG-hSIRP α 静脉接种Raji-Luc肿瘤模型评价SIRP α 抗体和Rituximab对肿瘤的生长抑制作用。Raji-Luc细胞培养在含10%胎牛血清的RPMI1640培养液中。将PBS重悬的Raji-Luc细胞以5X10⁵个/0.2mL浓度,0.2mL/只体积接种到B-NDG-hSIRP α 小鼠尾静脉。在接种后第0天、第3天使用小动物成像仪测量肿瘤成像信号值,当平均成像信号强度达到1×10⁶P/S 左右,根据肿瘤成像信号值、动物体重选择合适动物入组,平均分配到4个实验组中,每个实验组8只。分组当天开始给药,具体给药方案见下表:

组别	受试品	动物数(只)	剂量(mg/kg) ^a	给药途径	给药频率 ^b	给药次数
G1	溶剂对照 PBS	8	-	i. p.	Q3D	6
[0203] G2	Rituximab	8	0.1	i. v.	Q2W	2
G3	QP32700279	8	10	i. p.	Q3D	6
G5	QP32700279+ Rituximab	8	10+0.1	i. p. + i. v.	Q3D+ Q2W	6+2

[0204] 注:a:给药体积依实验动物体重按10 μ L/g计算;

[0205] b:Q3D指每3天给药1次,Q2W指每2周给药1次。

[0206] 分组给药当天计为D0,截止至D18,各组肿瘤成像信号值反应的肿瘤生长曲线及D18成像信号强度数据如图4和下表所示:

组别	D18 信号强度 P/S/cm ² /sr	D18 TGI%	p值 v. s. G1
G1	3.28E9 \pm 5.46E8/D18	--	--
[0207] G2	1.36E9 \pm 3.49E8/18	58.6%	0.0027**
G3	1.76E9 \pm 3.72E8/D18	46.4%	0.0167*
[0208] G4	5.08E8 \pm 1.6E8/D18	84.5%	<0.0001**

[0209] 肿瘤生长曲线结果显示,Rituximab、QP32700279及QP32700279、Rituximab联合用药组均能显著抑制Raji-Luc肿瘤生长,肿瘤抑制率(TGI)分别为58.6%、46.4%和84.5%,而且联合用药组比单独用药组表现出更强的抗肿瘤活性。

[0210] 由于模型特征,试验后期小鼠会出现行动异常或瘫痪的现象,此时给予小鼠安乐

死处理,并记录生存曲线。截止至G1组小鼠全部死亡(D25),各组生存曲线如图5所示

[0211] 生存分析采用Kaplan-Meier法,组间比较采用Logrank检验, $p < 0.05$ 视为差异显著。与对照组相比, QP32700279和联合给药组(QP32700279+Rituximab)均可以显著延长Raji-Luc荷瘤小鼠的生存期($p = 0.0445^*$, $p < 0.001^{**}$),而Rituximab组不能有效地延长荷瘤小鼠的生存期($p = 0.23$)。该试验结果提示, QP32700279和QP32700279+Rituximab联合给药可以有效地抑制Raji-Luc荷瘤小鼠的肿瘤生长情况,进而改善小鼠的生存情况。

序列表

<120> 一种靶向人 SIRP α 蛋白的特异性抗体及其应用

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Phe Pro Gly Ser Arg Cys Gln Ile Val Leu Thr Gln Ser Pro Ala Ile

20 25 30

Met Ser Ala Ser Pro Gly Glu Lys Val Thr Leu Thr Cys Ser Ala Ser

35 40 45

Ser Ser Val Ser Ser Ser Tyr Leu Tyr Trp Tyr Gln Gln Lys Pro Gly

50 55 60

Ser Ser Pro Lys Leu Trp Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly

65 70 75 80

Val Pro Ala Arg Phe Ser Gly Ser Gly Thr Ser Tyr Ser Leu

85 90 95

Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Ser Tyr Phe Cys His

100 105 110

[0212]

Gln Trp Ser Ser Tyr Pro Arg Thr Phe Gly Ala Gly Thr Lys Leu Glu

115 120 125

Leu Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser

130 135 140

Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn

145 150 155 160

Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala

165 170 175

Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys

180 185 190

Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp

195 200 205

Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu

210 215 220

Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys

225 230 235

<210> 2

<211> 462

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Val Gln Cys Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys

20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile

35 40 45
 Lys Asp Tyr Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu
 50 55 60
 Glu Trp Ile Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala
 65 70 75 80
 Pro Lys Phe Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
 85 90 95
 Thr Ala Tyr Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
 100 105 110
 Tyr Tyr Cys Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val
 115 120 125
 Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
 130 135 140
 Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
 145 150 155 160
 Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
 165 170 175
 Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
 180 185 190
 Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
 195 200 205
 Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
 210 215 220
 Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
 225 230 235 240
 Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
 245 250 255
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 260 265 270
 Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 275 280 285
 Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 290 295 300
 Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
 305 310 315 320
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 325 330 335
 Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 340 345 350
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 355 360 365
 Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 370 375 380
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 385 390 395 400
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 405 410 415
 Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 420 425 430
 Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 435 440 445
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 450 455 460

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 <211> 459
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Val Gln Cys Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys
20 25 30
Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile
35 40 45
Lys Asp Tyr Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu
50 55 60
Glu Trp Ile Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala
65 70 75 80
Pro Lys Phe Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
85 90 95
Thr Ala Tyr Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
100 105 110
Tyr Tyr Cys Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val
115 120 125
Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
130 135 140
Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu
145 150 155 160
Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
165 170 175
Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
180 185 190
Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
195 200 205
Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr
210 215 220
Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro
225 230 235 240
Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
245 250 255
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
260 265 270
Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
275 280 285
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
290 295 300
Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
305 310 315 320
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
325 330 335
Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
340 345 350
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
355 360 365
Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
370 375 380
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
385 390 395 400
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
405 410 415
Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly

[0214]

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                420                425                430
Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
                435                440                445
Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
                450                455

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Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
                20                25                30
Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro
                35                40                45
Lys Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Val Pro Ala
                50                55                60
Arg Phe Ser Ala Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His
65                70                75                80
Pro Met Glu Glu Asp Asp Thr Ala Met Tyr Phe Cys Gln Gln Thr Lys
                85                90                95
Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
                100               105               110
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
                115               120               125
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
                130               135               140
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
145                150                155                160
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
                165                170                175
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
                180                185                190
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
                195                200                205
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
                210                215

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Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Ser Phe
                20                25                30
Thr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Ile Trp Ile
                35                40                45
Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
                50                55                60
Lys Asp Lys Thr Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala Tyr

```

	65	70	75	80
	Met Gln Leu Asn Gly Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys			
		85	90	95
	Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr			
		100	105	110
	Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro			
		115	120	125
	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly			
		130	135	140
	Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn			
	145	150	155	160
	Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln			
		165	170	175
	Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser			
		180	185	190
	Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser			
		195	200	205
	Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr			
		210	215	220
	His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser			
	225	230	235	240
	Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg			
		245	250	255
	Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro			
		260	265	270
	Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala			
		275	280	285
[0216]	Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val			
		290	295	300
	Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr			
	305	310	315	320
	Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr			
		325	330	335
	Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu			
		340	345	350
	Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys			
		355	360	365
	Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser			
		370	375	380
	Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp			
	385	390	395	400
	Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser			
		405	410	415
	Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala			
		420	425	430
	Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
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	1	5	10	15

[0217]

Val Gln Cys Gln Val Gln Leu Gln Gln Ser Ala Ala Glu Leu Ala Arg			
	20	25	30
Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe			
	35	40	45
Thr Ser Phe Thr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu			
	50	55	60
Ile Trp Ile Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn			
	65	70	75
Pro Lys Phe Lys Asp Lys Thr Thr Leu Thr Ala Asp Lys Ser Ser Gly			
	85	90	95
Thr Ala Tyr Met Gln Leu Asn Gly Leu Thr Ser Glu Asp Ser Ala Val			
	100	105	110
Tyr Tyr Cys Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly			
	115	120	125
Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser			
	130	135	140
Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala			
	145	150	155
Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val			
	165	170	175
Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala			
	180	185	190
Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val			
	195	200	205
Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His			
	210	215	220
Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly			
	225	230	235
Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser			
	245	250	255
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg			
	260	265	270
Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro			
	275	280	285
Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala			
	290	295	300
Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val			
	305	310	315
Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr			
	325	330	335
Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr			
	340	345	350
Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu			
	355	360	365
Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys			
	370	375	380
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser			
	385	390	395
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp			
	405	410	415
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser			
	420	425	430
Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala			
	435	440	445
Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys			
	450	455	460

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 <212> PRT
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 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Ser Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ala
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Ile Leu Thr Ile Asp
 65 70 75 80
 Pro Val Glu Thr Asp Asp Ala Ala Thr Tyr Phe Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
 100 105 110
 Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
 115 120 125
 Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
 130 135 140
 Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
 145 150 155 160
 Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
 165 170 175
 Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
 180 185 190
 His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
 195 200 205
 Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

[0218]

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 Ser Leu Ser Ile Thr Cys Thr Ile Ser Gly Phe Ser Leu Thr Gly Tyr
 20 25 30
 Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu
 35 40 45
 Gly Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60
 Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln Leu Phe Leu
 65 70 75 80
 Lys Val Asn Ser Leu Gln Thr Asp Asp Thr Ala Lys Tyr Phe Cys Thr
 85 90 95
 Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 100 105 110
 Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro

115 120 125
 Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
 130 135 140
 Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
 145 150 155 160
 Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
 165 170 175
 Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly
 180 185 190
 Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys
 195 200 205
 Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
 210 215 220
 Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 385 390 395 400
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445

 <210> 9
 <211> 461
 <212> PRT
 <213> 人工合成(Artificial)

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 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala
 20 25 30
 Pro Ser Gln Ser Leu Ser Ile Thr Cys Thr Ile Ser Gly Phe Ser Leu
 35 40 45
 Thr Gly Tyr Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu
 50 55 60

	Glu Trp Leu Gly Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser		
	65	70	75
	Ala Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln		80
		85	90
	Leu Phe Leu Lys Val Asn Ser Leu Gln Thr Asp Asp Thr Ala Lys Tyr		95
		100	105
	Phe Cys Thr Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr		110
		115	120
	Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro		
		130	135
	Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly		
	145	150	155
	Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn		160
		165	170
	Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln		175
		180	185
	Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser		190
		195	200
	Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser		
		210	215
	Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys		
	225	230	235
	Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu		240
		245	250
	Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu		255
		260	265
	Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln		270
[0220]		275	280
	Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys		
		290	295
	Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu		
	305	310	315
	Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys		320
		325	330
	Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys		335
		340	345
	Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser		350
		355	360
	Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys		
		370	375
	Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln		
	385	390	395
	Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly		400
		405	410
	Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln		415
		420	425
	Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn		430
		435	440
	His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		445
		450	455
			460
	<210> 10		
	<211> 214		
	<212> PRT		
	<213> 人工合成(Artificial)		

<400> 10
 Asp Ile Lys Met Thr Gln Ser Pro Ser Ser Met Tyr Ala Ser Leu Gly
 1 5 10 15
 Glu Arg Val Thr Ile Ile Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Gln Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Tyr
 65 70 75 80
 Glu Asp Leu Gly Ile Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110
 Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125
 Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140
 Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160
 Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190
 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205
 Phe Asn Arg Gly Glu Cys
 [0221] 210

<210> 11
 <211> 448
 <212> PRT
 <213> 人工合成(Artificial)

<400> 11
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Ile Arg Gln Thr Pro Asp Lys Arg Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Met Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
 115 120 125
 Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
 130 135 140
 Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
 145 150 155 160

	Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln			
	165	170	175	
	Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser			
	180	185	190	
	Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser			
	195	200	205	
	Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr			
	210	215	220	
	His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser			
	225	230	235	240
	Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg			
	245	250	255	
	Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro			
	260	265	270	
	Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala			
	275	280	285	
	Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val			
	290	295	300	
	Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr			
	305	310	315	320
	Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr			
	325	330	335	
	Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu			
	340	345	350	
	Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys			
	355	360	365	
	Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser			
	370	375	380	
[0222]	Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp			
	385	390	395	400
	Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser			
	405	410	415	
	Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala			
	420	425	430	
	Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
	435	440	445	
	<210> 12			
	<211> 464			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 12			
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
	1	5	10	15
	Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln			
	20	25	30	
	Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe			
	35	40	45	
	Ser Ser Phe Ser Met Ser Trp Ile Arg Gln Thr Pro Asp Lys Arg Leu			
	50	55	60	
	Glu Val Val Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro			
	65	70	75	80
	Asp Asn Met Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn			
	85	90	95	
	Thr Leu Tyr Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Met			

	100	105	110
	Tyr Tyr Cys Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly		
	115	120	125
	Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser		
	130	135	140
	Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala		
	145	150	155
	Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val		
	165	170	175
	Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala		
	180	185	190
	Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val		
	195	200	205
	Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His		
	210	215	220
	Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly		
	225	230	235
	Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser		
	245	250	255
	Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg		
	260	265	270
	Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro		
	275	280	285
	Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala		
	290	295	300
	Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val		
	305	310	315
[0223]	Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr		
	325	330	335
	Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr		
	340	345	350
	Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu		
	355	360	365
	Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys		
	370	375	380
	Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser		
	385	390	395
	Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp		
	405	410	415
	Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser		
	420	425	430
	Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala		
	435	440	445
	Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		
	450	455	460
	<210> 13		
	<211> 217		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 13		
	Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly		
	1	5	10
	Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Lys Ser Val Ser Ser Ser		
	20	25	30

Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Ala
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
 65 70 75 80
 Pro Val Glu Glu Glu Asp Ala Ala Thr Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr
 100 105 110
 Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
 115 120 125
 Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
 130 135 140
 Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
 145 150 155 160
 Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
 165 170 175
 Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
 180 185 190
 Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
 195 200 205
 Thr Lys Ser Phe Asn Arg Gly Glu Cys
 210 215

[0224]

<210> 14
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

<400> 14
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro

195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 [0225] Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

<210> 15
 <211> 465
 <212> PRT
 <213> 人工合成(Artificial)

<400> 15
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg
 20 25 30
 Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45
 Thr Asn Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
 50 55 60
 Glu Trp Ile Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn
 65 70 75 80
 Gln Ile Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn
 85 90 95
 Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp
 115 120 125

	Gly Arg Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro	
	130 135 140	
	Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr	
	145 150 155 160	
	Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr	
	165 170 175	
	Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro	
	180 185 190	
	Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr	
	195 200 205	
	Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp	
	210 215 220	
	His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr	
	225 230 235 240	
	Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro	
	245 250 255	
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser	
	260 265 270	
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp	
	275 280 285	
	Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn	
	290 295 300	
	Ala Lys Thr Lys Pro Arg Glu Gln Phe Asn Ser Thr Tyr Arg Val	
	305 310 315 320	
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu	
	325 330 335	
	Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys	
	340 345 350	
[0226]	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr	
	355 360 365	
	Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr	
	370 375 380	
	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu	
	385 390 395 400	
	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu	
	405 410 415	
	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys	
	420 425 430	
	Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu	
	435 440 445	
	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly	
	450 455 460	
	Lys	
	465	
	<210> 16	
	<211> 214	
	<212> PRT	
	<213> 人工合成(Artificial)	
	<400> 16	
	Asp Ile Val Met Thr Gln Ser His Lys Phe Val Ser Thr Ser Val Gly	
	1 5 10 15	
	Asp Arg Val Asn Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala	
	20 25 30	
	Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile	

35 40 45
 Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Val Gln Ala
 65 70 75 80
 Asp Asp Leu Ala Leu Phe Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95
 Thr Phe Ala Gly Gly Thr Lys Leu Glu Ile Arg Arg Thr Val Ala Ala
 100 105 110
 Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125
 Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140
 Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160
 Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190
 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205
 Phe Asn Arg Gly Glu Cys
 210

<210> 17
 <211> 452
 <212> PRT
 <213> 人工合成(Artificial)

[0227]

<400> 17
 Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Trp Leu Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr
 20 25 30
 Trp Met Ser Trp Val Lys Gln Arg Pro Gly Gln Arg Leu Glu Trp Ile
 35 40 45
 Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe
 50 55 60
 Lys Asp Lys Val Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Val Tyr
 65 70 75 80
 Leu Gln Leu Asn Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp
 100 105 110
 Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 115 120 125
 Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr
 130 135 140
 Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 145 150 155 160
 Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
 165 170 175
 Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
 180 185 190
 Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
 195 200 205

	His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser	
	210 215 220	
	Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu	
	225 230 235 240	
	Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu	
	245 250 255	
	Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser	
	260 265 270	
	His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu	
	275 280 285	
	Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr	
	290 295 300	
	Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn	
	305 310 315 320	
	Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro	
	325 330 335	
	Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln	
	340 345 350	
	Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val	
	355 360 365	
	Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val	
	370 375 380	
	Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro	
	385 390 395 400	
	Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr	
	405 410 415	
	Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val	
	420 425 430	
[0228]	Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu	
	435 440 445	
	Ser Pro Gly Lys	
	450	
	<210> 18	
	<211> 468	
	<212> PRT	
	<213> 人工合成(Artificial)	
	<400> 18	
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly	
	1 5 10 15	
	Val Gln Cys Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg	
	20 25 30	
	Pro Gly Ala Ser Val Trp Leu Ser Cys Lys Ala Ser Gly Tyr Ser Phe	
	35 40 45	
	Thr Thr Tyr Trp Met Ser Trp Val Lys Gln Arg Pro Gly Gln Arg Leu	
	50 55 60	
	Glu Trp Ile Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn	
	65 70 75 80	
	Gln Arg Phe Lys Asp Lys Val Thr Leu Thr Val Asp Lys Ser Ser Asn	
	85 90 95	
	Thr Val Tyr Leu Gln Leu Asn Ser Pro Thr Ser Glu Asp Ser Ala Val	
	100 105 110	
	Tyr Tyr Cys Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe	
	115 120 125	
	Gly Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr	

	130	135	140	
	Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser			
	145	150	155	160
	Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu			
		165	170	175
	Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His			
		180	185	190
	Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser			
		195	200	205
	Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys			
		210	215	220
	Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu			
	225	230	235	240
	Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu			
		245	250	255
	Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu			
		260	265	270
	Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser			
		275	280	285
	Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu			
		290	295	300
	Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr			
	305	310	315	320
	Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn			
		325	330	335
	Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser			
		340	345	350
[0229]	Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln			
		355	360	365
	Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val			
		370	375	380
	Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val			
	385	390	395	400
	Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro			
		405	410	415
	Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr			
		420	425	430
	Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val			
		435	440	445
	Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu			
		450	455	460
	Ser Leu Gly Lys			
	465			
	<210> 19			
	<211> 111			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 19			
	Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly			
	1	5	10	15
	Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr			
		20	25	30
	Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro			
		35	40	45

Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Ile Pro Ala
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95
 Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 20
 <211> 111
 <212> PRT
 <213> 人工合成(Artificial)

<400> 20
 Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
 20 25 30
 Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
 35 40 45
 Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Ile Pro Ala
 50 55 60
 Arg Phe Ser Ala Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95
 [0230] Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 21
 <211> 111
 <212> PRT
 <213> 人工合成(Artificial)

<400> 21
 Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
 20 25 30
 Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
 35 40 45
 Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Val Pro Ala
 50 55 60
 Arg Phe Ser Ala Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95
 Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 22
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 22
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30
 Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 23
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

[0231] <400> 23
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30
 Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 24
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 24
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30
 Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Thr Asp Lys Ser Thr Ser Thr Ala Tyr

	65	70	75	80
	Met Glu Leu Asn Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr			
	100	105	110	
	Leu Val Thr Val Ser Ser			
	115			
	<210>	25		
	<211>	118		
	<212>	PRT		
	<213>	人工合成(Artificial)		
	<400>	25		
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe			
		20	25	30
	Thr Ile His Trp Val Arg Gln Arg Pro Gly Gln Gly Leu Ile Trp Ile			
		35	40	45
	Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe			
		50	55	60
	Lys Asp Arg Val Thr Met Thr Ala Asp Lys Ser Thr Gly Thr Ala Tyr			
	65	70	75	80
	Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr			
	100	105	110	
[0232]	Leu Val Thr Val Ser Ser			
	115			
	<210>	26		
	<211>	118		
	<212>	PRT		
	<213>	人工合成(Artificial)		
	<400>	26		
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Ser Phe			
		20	25	30
	Thr Ile His Trp Val Arg Gln Arg Pro Gly Gln Gly Leu Ile Trp Ile			
		35	40	45
	Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe			
		50	55	60
	Lys Asp Arg Val Thr Met Thr Ala Asp Lys Ser Thr Gly Thr Ala Tyr			
	65	70	75	80
	Met Glu Leu Asn Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr			
	100	105	110	
	Leu Val Thr Val Ser Ser			
	115			
	<210>	27		
	<211>	111		

<212> PRT
 <213> 人工合成(Artificial)

<400> 27
 Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
 35 40 45
 Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 28
 <211> 111
 <212> PRT
 <213> 人工合成(Artificial)

[0233]

<400> 28
 Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro
 35 40 45
 Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 29
 <211> 115
 <212> PRT
 <213> 人工合成(Artificial)

<400> 29
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr
 20 25 30
 Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60
 Ser Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110
Val Ser Ser
115

<210> 30
<211> 115
<212> PRT
<213> 人工合成(Artificial)

<400> 30
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr
20 25 30
Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60
Ser Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr
85 90 95
Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110
Val Ser Ser
115

[0234]

<210> 31
<211> 115
<212> PRT
<213> 人工合成(Artificial)

<400> 31
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr
20 25 30
Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60
Ser Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80
Gln Val Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr
85 90 95
Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
100 105 110
Val Ser Ser
115

<210> 32
<211> 115
<212> PRT

<213> 人工合成(Artificial)

<400> 32
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ile Ser Gly Phe Ser Leu Thr Gly Tyr
 20 25 30
 Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60
 Ser Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Leu Tyr Leu
 65 70 75 80
 Gln Val Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr
 85 90 95
 Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
 100 105 110
 Val Ser Ser
 115

<210> 33
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

[0235]

<400> 33
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 34
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 34
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro

```

65                70                75                80
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
                85                90                95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
                100                105
    
```

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<210> 35
<211> 107
<212> PRT
<213> 人工合成(Artificial)
    
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```

<400> 35
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1                5                10                15
Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
                20                25                30
Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro Lys Thr Leu Ile
                35                40                45
Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
                50                55                60
Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65                70                75                80
Glu Asp Phe Ala Ile Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
                85                90                95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
                100                105
    
```

[0236]

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<210> 36
<211> 118
<212> PRT
<213> 人工合成(Artificial)
    
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```

<400> 36
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1                5                10                15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
                20                25                30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
                35                40                45
Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
                50                55                60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                70                75                80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                90                95
Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
                100                105                110
Leu Val Thr Val Ser Ser
                115
    
```

```

<210> 37
<211> 118
<212> PRT
<213> 人工合成(Artificial)
    
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```

<400> 37
    
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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 38
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

[0237] <400> 38
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 39
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 39
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 40
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 40
 Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

[0238]

<210> 41
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 41
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 42
 <211> 119
 <212> PRT
 <213> 人工合成(Artificial)

<400> 42
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
		20	25	30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met			
		35	40	45
	Gly Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
		50	55	60
	Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
	65	70	75	80
	Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Ala Arg Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
		100	105	110
	Thr Leu Val Thr Val Ser Ser			
		115		
	<210> 43			
	<211> 119			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 43			
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
		20	25	30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met			
		35	40	45
[0239]	Gly Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
		50	55	60
	Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
	65	70	75	80
	Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
		100	105	110
	Thr Leu Val Thr Val Ser Ser			
		115		
	<210> 44			
	<211> 119			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 44			
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
		20	25	30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile			
		35	40	45
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
		50	55	60
	Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
	65	70	75	80
	Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			

85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser
 115
 <210> 45
 <211> 119
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 45
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser
 115

[0240]

<210> 46
 <211> 119
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 46
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser
 115
 <210> 47
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 47
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala
 20 25 30
 Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95
 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 48
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

[0241]

<400> 48
 Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala
 20 25 30
 Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
 35 40 45
 Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95
 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 49
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 49
 Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala
 20 25 30
 Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
 35 40 45
 Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 50
 <211> 122
 <212> PRT
 <213> 人工合成(Artificial)

<400> 50
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr
 20 25 30
 Trp Met Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp
 100 105 110
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

[0242]

<210> 51
 <211> 122
 <212> PRT
 <213> 人工合成(Artificial)

<400> 51
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr
 20 25 30
 Trp Met Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe
 50 55 60
 Lys Asp Arg Val Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp
 100 105 110
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 52
 <211> 122
 <212> PRT
 <213> 人工合成(Artificial)

<400> 52
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr
 20 25 30
 Trp Met Ser Trp Val Lys Gln Ala Pro Gly Gln Arg Leu Glu Trp Ile
 35 40 45
 Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe
 50 55 60
 Lys Asp Lys Val Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Val Tyr
 65 70 75 80
 Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp
 100 105 110
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 53
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0243]

<400> 53
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Ala Glu Ser Trp
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 54
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 54
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Ala Ala Arg Trp
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

	100	105	110
<210>	55		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	55		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210>	56		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	56		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Ser Trp Ser			
	20	25	30
Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

[0244]

<210>	57		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	57		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Asn			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 58
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 58
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gly Ser Val Ser Ser Gly
 20 25 30
 Gly Tyr Asp Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 [0245] Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 59
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 59
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Glu Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 60
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 60
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Glu Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 61
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0246]

<400> 61
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 62
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 62
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Gly
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

	100	105	110
<210>	63		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	63		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210>	64		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	64		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

[0247]

<210>	65		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	65		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45

	Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Val Gly Val Pro Asp	
	50 55 60	
	Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser	
	65 70 75 80	
	Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg	
	85 90 95	
	Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys	
	100 105 110	
	<210> 66	
	<211> 110	
	<212> PRT	
	<213> 人工合成(Artificial)	
	<400> 66	
	Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly	
	1 5 10 15	
	Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser	
	20 25 30	
	Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro	
	35 40 45	
	Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Tyr Gly Val Pro Asp	
	50 55 60	
	Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser	
	65 70 75 80	
	Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg	
	85 90 95	
[0248]	Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys	
	100 105 110	
	<210> 67	
	<211> 110	
	<212> PRT	
	<213> 人工合成(Artificial)	
	<400> 67	
	Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly	
	1 5 10 15	
	Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser	
	20 25 30	
	Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro	
	35 40 45	
	Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Pro Gly Val Pro Asp	
	50 55 60	
	Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser	
	65 70 75 80	
	Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg	
	85 90 95	
	Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys	
	100 105 110	
	<210> 68	
	<211> 110	
	<212> PRT	
	<213> 人工合成(Artificial)	

<400> 68
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Gly Ser Tyr Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 69
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0249]

<400> 69
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Trp Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 70
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 70
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Ala Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

	100	105	110
<210>	71		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	71		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Glu Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210>	72		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	72		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

[0250]

<210>	73		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	73		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Arg
 85 90 95
 Glu Leu Pro Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 74
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 74
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 [0251] Glu Leu Pro Gly Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 75
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 75
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Trp
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 76
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 76
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gly Val Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 77
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0252]

<400> 77
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Leu
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 78
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 78
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Ile
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

	100	105	110
<210>	79		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	79		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Arg			
	85	90	95
Asp Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210>	80		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	80		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Asp Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

[0253]

<210>	81		
<211>	118		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	81		
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly			
1	5	10	15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Arg			
	20	25	30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val			
	35	40	45

Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 82
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 82
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser His Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

[0254]

<210> 83
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 83
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 84
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 84
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 15
 1 5 10
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Lys 30
 20 25
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val 45
 35 40
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met 60
 50 55
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr 80
 65 70 75
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 95
 85 90
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr 110
 100 105
 Leu Val Thr Val Ser Ser 115

<210> 85
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

[0255]

<400> 85
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 15
 1 5 10
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe 30
 20 25
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val 45
 35 40
 Ala Thr Ile Asn Ser Asp Gly Ser Asn Thr Tyr Glu Pro Gly Asn Met 60
 50 55
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr 80
 65 70 75
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 95
 85 90
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr 110
 100 105
 Leu Val Thr Val Ser Ser 115

<210> 86
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 86
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 15
 1 5 10
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe

20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Gly Ser Thr Trp Tyr Pro Asp Pro Thr
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 87
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 87
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ala Gly Gly Glu Ser Thr Tyr Tyr Pro Asp Pro Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

[0256]

<210> 88
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 88
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Ile Asn Ser Ser Gly Glu Asn Ser Tyr Ala Pro Asp Thr Met
 50 55 60
 Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr

100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 89
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 89
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Gly Asn Thr Tyr Tyr Pro Arg Tyr Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

[0257]

<210> 90
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 90
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Ser Ala Thr Tyr Tyr Pro Gln Arg Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 91
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 91

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asp Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 92
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

[0258]

<400> 92
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Ile Asn Ser Asp Gly Ser Ser Ser Tyr Tyr Pro Ala Arg Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 93
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 93
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro His Trp Met Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 94
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 94
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro His Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

[0259]

<210> 95
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)

<400> 95
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asn Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 96
 <211> 118
 <212> PRT

<213> 人工合成(Artificial)

<400> 96
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asn Tyr Phe Asp Ile Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 97
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

[0260]

<400> 97
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Glu Ala Ser Gln Asp Ile Asp Ser Tyr
 20 25 30
 Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 98
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 98
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser His Asp Ile Leu Gly Tyr
 20 25 30
 Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro

Asp Arg Val Thr Ile Thr Cys Gly Ala Ser Gln Asp Ile Ser Ser Tyr
 20 25 30
 Thr Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 102
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 102
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Arg Asp Ile Asp Ser Tyr
 20 25 30
 Ala Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

[0262]

<210> 103
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 103
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Glu Ala Gly Ser Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 104

<211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 104
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Lys Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 105
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

[0263]

<400> 105
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Glu Ser Asn Glu Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 106
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 106
 Asn Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Tyr Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Ser Ala Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 110
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 110
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Asp Leu Leu Lys Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

[0265]

<210> 111
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 111
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Ala Ser Ser Arg Asp Ile Asn Ser Tyr
 20 25 30
 Ser Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 112

<211> 107
 <212> PRT
 <213> 人工合成(Artificial)

<400> 112
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ser Ser Lys Asp Ile Glu Ser Tyr
 20 25 30
 Leu Ser Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 113
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)

[0266]

<400> 113
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ser Lys Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 114
 <211> 374
 <212> PRT
 <213> 人工合成(Artificial)

<400> 114
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Gln Leu Leu Phe Asn Lys Thr Lys Ser Val Glu Phe Thr
 20 25 30
 Phe Cys Asn Asp Thr Val Val Ile Pro Cys Phe Val Thr Asn Met Glu
 35 40 45
 Ala Gln Asn Thr Thr Glu Val Tyr Val Lys Trp Lys Phe Lys Gly Arg
 50 55 60
 Asp Ile Tyr Thr Phe Asp Gly Ala Leu Asn Lys Ser Thr Val Pro Thr

	65	70	75	80
	Asp Phe Ser Ser Ala Lys Ile Glu Val Ser Gln Leu Leu Lys Gly Asp			
		85	90	95
	Ala Ser Leu Lys Met Asp Lys Ser Asp Ala Val Ser His Thr Gly Asn			
		100	105	110
	Tyr Thr Cys Glu Val Thr Glu Leu Thr Arg Glu Gly Glu Thr Ile Ile			
		115	120	125
	Glu Leu Lys Tyr Arg Val Val Ser Trp Phe Ser Pro Asn Glu Glu Pro			
		130	135	140
	Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu			
	145	150	155	160
	Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp			
		165	170	175
	Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp			
		180	185	190
	Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly			
		195	200	205
	Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn			
		210	215	220
	Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp			
	225	230	235	240
	Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro			
		245	250	255
	Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu			
		260	265	270
	Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn			
		275	280	285
[0267]	Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile			
		290	295	300
	Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr			
		305	310	315
	Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys			
		325	330	335
	Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys			
		340	345	350
	Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu			
		355	360	365
	Ser Leu Ser Pro Gly Lys			
		370		
	<210> 115			
	<211> 370			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 115			
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
	1	5	10	15
	Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val			
		20	25	30
	Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Val Thr Ser			
		35	40	45
	Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly			
		50	55	60
	Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr			
	65	70	75	80

Thr Val Ser Asp Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Glu Pro Lys Ser Ser Asp
 130 135 140
 Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
 145 150 155 160
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 165 170 175
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 180 185 190
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 195 200 205
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 210 215 220
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 225 230 235 240
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 245 250 255
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 260 265 270
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 275 280 285
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 290 295 300
 [0268] Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 305 310 315 320
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 325 330 335
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 340 345 350
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 355 360 365
 Gly Lys
 370

<210> 116
 <211> 152
 <212> PRT
 <213> 人工合成(Artificial)

<400> 116
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg

85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Asp Tyr Lys Asp Asp Asp
 130 135 140
 Asp Lys His His His His His His
 145 150

 <210> 117
 <211> 592
 <212> PRT
 <213> 人工合成(Artificial)

 <400> 117
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Leu Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 [0269] Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly
 130 135 140
 Pro Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu
 145 150 155 160
 Ser His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn
 165 170 175
 Gly Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu
 180 185 190
 Ser Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg
 195 200 205
 Glu Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu
 210 215 220
 Gln Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg
 225 230 235 240
 Val Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn
 245 250 255
 Gln Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu
 260 265 270
 Gln Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala
 275 280 285
 Ser Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp
 290 295 300
 Leu Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys
 305 310 315 320

	Gln Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu			
	325	330	335	
	Lys Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu			
	340	345	350	
	Asn Thr Gly Ser Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro			
	355	360	365	
	Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser			
	370	375	380	
	Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu			
	385	390	395	400
	Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro			
	405	410	415	
	Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala			
	420	425	430	
	Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val			
	435	440	445	
	Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe			
	450	455	460	
	Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr			
	465	470	475	480
	Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu			
	485	490	495	
	Pro Pro Pro Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys			
	500	505	510	
	Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn			
	515	520	525	
	Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp			
	530	535	540	
[0270]	Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys			
	545	550	555	560
	Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly			
	565	570	575	
	Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
	580	585	590	
	<210> 118			
	<211> 376			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 118			
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
	1	5	10	15
	Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val			
	20	25	30	
	Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Ala Thr Ser			
	35	40	45	
	Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly			
	50	55	60	
	Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr			
	65	70	75	80
	Thr Val Ser Asp Leu Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg			
	85	90	95	
	Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
	100	105	110	
	Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly			

115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly
 130 135 140
 Pro Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu
 145 150 155 160
 Ser His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn
 165 170 175
 Gly Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu
 180 185 190
 Ser Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg
 195 200 205
 Glu Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu
 210 215 220
 Gln Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg
 225 230 235 240
 Val Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn
 245 250 255
 Gln Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu
 260 265 270
 Gln Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala
 275 280 285
 Ser Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp
 290 295 300
 Leu Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys
 305 310 315 320
 Gln Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu
 325 330 335
 Lys Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu
 340 345 350
 Asn Thr Gly Ser Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp
 355 360 365
 Asp Lys His His His His His His
 370 375

[0271]

<210> 119
 <211> 591
 <212> PRT
 <213> 人工合成(Artificial)

<400> 119
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Glu Ser Ala Ile Leu His Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Ala
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Glu Ser Thr Lys Arg Glu Asn Met Asp Phe Ser Ile Ser
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Thr Glu Phe Lys Ser Gly Ala Gly Thr
 115 120 125

Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu Ser
 180 185 190
 Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg Glu
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg Val
 225 230 235 240
 Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser
 275 280 285
 Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 [0272] Thr Gly Ser Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys
 355 360 365
 Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val
 370 375 380
 Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
 385 390 395 400
 Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
 405 410 415
 Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
 420 425 430
 Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
 435 440 445
 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 450 455 460
 Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile
 465 470 475 480
 Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 485 490 495
 Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met
 500 505 510
 Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn
 515 520 525
 Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser
 530 535 540
 Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn
 545 550 555 560
 Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu
 565 570 575
 His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys

	580	585	590
<210>	120		
<211>	375		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	120		
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
1	5	10	15
Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val			
	20	25	30
Ser Val Ala Ala Gly Glu Ser Ala Ile Leu His Cys Thr Val Thr Ser			
	35	40	45
Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Ala			
	50	55	60
Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr			
65	70	75	80
Thr Val Ser Glu Ser Thr Lys Arg Glu Asn Met Asp Phe Ser Ile Ser			
	85	90	95
Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
	100	105	110
Phe Arg Lys Gly Ser Pro Asp Thr Glu Phe Lys Ser Gly Ala Gly Thr			
	115	120	125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro			
	130	135	140
Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser			
145	150	155	160
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
	165	170	175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu Ser			
	180	185	190
Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg Glu			
	195	200	205
Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
	210	215	220
Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg Val			
225	230	235	240
Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln			
	245	250	255
Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln			
	260	265	270
Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser			
	275	280	285
Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu			
	290	295	300
Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln			
305	310	315	320
Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys			
	325	330	335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
	340	345	350
Thr Gly Ser Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp Asp			
	355	360	365
Lys His His His His His His			
	370	375	

[0273]

<210> 121
 <211> 591
 <212> PRT
 <213> 人工合成(Artificial)

 <400> 121
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Ser Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Leu Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Ala Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Val Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Leu Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys
 355 360 365
 Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val
 370 375 380
 Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser

[0274]

385	390	395	400
Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp			
	405	410	415
Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln			
	420	425	430
Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser			
	435	440	445
Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys			
	450	455	460
Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile			
465	470	475	480
Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro			
	485	490	495
Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met			
	500	505	510
Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn			
	515	520	525
Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser			
	530	535	540
Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn			
545	550	555	560
Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu			
	565	570	575
His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
	580	585	590

[0275]

<210> 122
 <211> 375
 <212> PRT
 <213> 人工合成(Artificial)

<400>	122		
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
1	5	10	15
Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val			
	20	25	30
Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Ser Ser			
	35	40	45
Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly			
	50	55	60
Arg Glu Leu Ile Tyr Asn Leu Lys Glu Gly His Phe Pro Arg Val Thr			
65	70	75	80
Ala Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg			
	85	90	95
Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
	100	105	110
Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr			
	115	120	125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro			
	130	135	140
Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser			
145	150	155	160
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
	165	170	175
Asn Glu Leu Ser Asp Val Gln Thr Asn Val Asp Pro Ala Gly Lys Ser			
	180	185	190

Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Leu Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp Asp
 355 360 365
 Lys His His His His His
 370 375

[0276]

<210> 123
 <211> 591
 <212> PRT
 <213> 人工合成(Artificial)

<400> 123
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg

	195	200	205	
	Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
	210	215	220	
	Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val			
	225	230	235	240
	Pro Pro Phe Leu Glu Phe Thr Gln Gln Ser Met Arg Ala Asp Asn Gln			
	245	250	255	
	Val Asn Val Thr Cys Gln Val Met Lys Phe Tyr Pro Gln Arg Leu Gln			
	260	265	270	
	Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser			
	275	280	285	
	Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu			
	290	295	300	
	Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln			
	305	310	315	320
	Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys			
	325	330	335	
	Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
	340	345	350	
	Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys			
	355	360	365	
	Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val			
	370	375	380	
	Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser			
	385	390	395	400
	Pro Ile Val Thr Cys Val Val Asp Val Ser Glu Asp Asp Pro Asp			
	405	410	415	
[0277]	Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln			
	420	425	430	
	Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser			
	435	440	445	
	Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys			
	450	455	460	
	Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile			
	465	470	475	480
	Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro			
	485	490	495	
	Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met			
	500	505	510	
	Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn			
	515	520	525	
	Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser			
	530	535	540	
	Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn			
	545	550	555	560
	Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu			
	565	570	575	
	His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
	580	585	590	
	<210> 124			
	<211> 375			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 124			

Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Phe Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Met Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp Asp
 355 360 365
 Lys His His His His His His
 370 375

<210> 125
 <211> 372
 <212> PRT
 <213> 人工合成(Artificial)

<400> 125
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly

	1	5	10	15
	Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val			
		20	25	30
	Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Thr Ser			
		35	40	45
	Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly			
		50	55	60
	Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr			
		65	70	75
	Ser Val Ser Glu Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile His			
		85	90	95
	Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
		100	105	110
	Phe Arg Lys Gly Ser Pro Asp Val Glu Val Lys Ser Gly Ala Gly Thr			
		115	120	125
	Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro			
		130	135	140
	Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser			
		145	150	155
	His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
		165	170	175
	Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser			
		180	185	190
	Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg			
		195	200	205
	Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
		210	215	220
[0279]	Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val			
		225	230	235
	Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln			
		245	250	255
	Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln			
		260	265	270
	Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser			
		275	280	285
	Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu			
		290	295	300
	Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln			
		305	310	315
	Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys			
		325	330	335
	Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
		340	345	350
	Thr Gly Thr Asn Glu Arg Asp Tyr Lys Asp Asp Asp Asp Lys His His			
		355	360	365
	His His His His			
		370		
	<210> 126			
	<211> 591			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 126			
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
	1	5	10	15

Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Ser Val Ser Glu Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile His
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Val Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 [0280] Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys
 355 360 365
 Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val
 370 375 380
 Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
 385 390 395 400
 Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
 405 410 415
 Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
 420 425 430
 Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
 435 440 445
 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 450 455 460
 Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile

	465	470	475	480
	Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro			
		485	490	495
	Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met			
		500	505	510
	Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn			
		515	520	525
	Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser			
		530	535	540
	Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn			
	545	550	555	560
	Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu			
		565	570	575
	His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
		580	585	590
	<210> 127			
	<211> 372			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 127			
	Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
	1	5	10	15
	Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val			
		20	25	30
	Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser			
		35	40	45
[0281]	Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly			
		50	55	60
	Arg Glu Leu Ile Tyr Ser Gln Lys Glu Gly His Phe Pro Arg Val Thr			
	65	70	75	80
	Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg			
		85	90	95
	Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
		100	105	110
	Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr			
		115	120	125
	Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro			
		130	135	140
	Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser			
	145	150	155	160
	His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
		165	170	175
	Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser			
		180	185	190
	Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg			
		195	200	205
	Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
		210	215	220
	Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val			
	225	230	235	240
	Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln			
		245	250	255
	Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln			
		260	265	270

Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Asp Tyr Lys Asp Asp Asp Asp Lys His His
 355 360 365
 His His His His
 370

<210> 128
 <211> 591
 <212> PRT
 <213> 人工合成(Artificial)

<400> 128
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Ser Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser

[0282]

	275	280	285	
	Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu			
	290	295	300	
	Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln			
	305	310	315	320
	Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys			
	325	330		335
	Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
	340	345		350
	Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys			
	355	360	365	
	Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val			
	370	375	380	
	Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser			
	385	390	395	400
	Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp			
	405	410		415
	Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln			
	420	425		430
	Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser			
	435	440	445	
	Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys			
	450	455	460	
	Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile			
	465	470	475	480
	Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro			
	485	490		495
[0283]	Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met			
	500	505		510
	Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn			
	515	520	525	
	Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser			
	530	535	540	
	Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn			
	545	550	555	560
	Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu			
	565	570		575
	His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
	580	585		590
	<210> 129			
	<211> 449			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 129			
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
	20	25		30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile			
	35	40	45	
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
	50	55	60	
	Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
	65	70	75	80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
210 215 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
225 230 235 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300
[0284] Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445
Lys

<210> 130

<211> 446

<212> PRT

<213> 人工合成(Artificial)

<400> 130

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 [0285] 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 131

<211> 449
 <212> PRT
 <213> 人工合成(Artificial)

<400> 131
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys

[0286]

	405	410	415
	Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu		
	420	425	430
	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly		
	435	440	445
	Lys		
<210>	132		
<211>	446		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	132		
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala		
	1	5	10
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr		15
	20	25	30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile		
	35	40	45
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe		
	50	55	60
	Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr		
	65	70	75
	Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys		80
	85	90	95
	Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly		
	100	105	110
[0287]	Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
	115	120	125
	Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu		
	130	135	140
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
	145	150	155
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		160
	165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
	180	185	190
	Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro		
	195	200	205
	Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro		
	210	215	220
	Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe		
	225	230	235
	Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro		240
	245	250	255
	Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val		
	260	265	270
	Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr		
	275	280	285
	Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val		
	290	295	300
	Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys		
	305	310	315
	Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser		320
	325	330	335

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 133
 <211> 445
 <212> PRT
 <213> 人工合成(Artificial)

<400> 133
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys

[0288]

275 280 285
 Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 385 390 395 400
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445

<210> 134
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

[0289]

<400> 134
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Pro Gly
 435 440 445
 [0290] Lys

<210> 135
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

<400> 135
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp

	145	150	155	160
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu			
		165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser			
		180	185	190
	Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro			
		195	200	205
	Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys			
		210	215	220
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro			
	225	230	235	240
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
		245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
		260	265	270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
		275	280	285
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val			
		290	295	300
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
	305	310	315	320
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys			
		325	330	335
	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
		340	345	350
	Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
		355	360	365
[0291]	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
		370	375	380
	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
	385	390	395	400
	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
		405	410	415
	Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
		420	425	430
	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
		435	440	445
	Lys			
	<210> 136			
	<211> 449			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 136			
	Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
		20	25	30
	Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile			
		35	40	45
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
		50	55	60
	Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
	65	70	75	80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
210 215 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300
[0292] Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335
Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445
Lys

<210> 137

<211> 449

<212> PRT

<213> 人工合成(Artificial)

<400> 137

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

[0293]

1	5	10	15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
20	25	30	
Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile			
35	40	45	
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
50	55	60	
Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
65	70	75	80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
85	90	95	
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
100	105	110	
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe			
115	120	125	
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu			
130	135	140	
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp			
145	150	155	160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu			
165	170	175	
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser			
180	185	190	
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro			
195	200	205	
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys			
210	215	220	
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Ala Gly Pro			
225	230	235	240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
245	250	255	
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
260	265	270	
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
275	280	285	
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val			
290	295	300	
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
305	310	315	320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
325	330	335	
Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
340	345	350	
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
355	360	365	
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
370	375	380	
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
385	390	395	400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
405	410	415	
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
420	425	430	
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
435	440	445	
Lys			

<210> 138
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)

<400> 138
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 275 280 285
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 340 345 350
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 355 360 365
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 370 375 380
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe

[0294]

	385	390	395	400
	Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly			
		405	410	415
	Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr			
		420	425	430
	Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
		435	440	
	<210> 139			
	<211> 440			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 139			
	Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala			
	1	5	10	15
	Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr			
		20	25	30
	Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile			
		35	40	45
	Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe			
		50	55	60
	Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr			
	65	70	75	80
	Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser			
		100	105	110
[0295]	Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser			
		115	120	125
	Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp			
		130	135	140
	Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr			
	145	150	155	160
	Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr			
		165	170	175
	Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys			
		180	185	190
	Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp			
		195	200	205
	Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala			
		210	215	220
	Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro			
	225	230	235	240
	Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val			
		245	250	255
	Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val			
		260	265	270
	Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln			
		275	280	285
	Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln			
		290	295	300
	Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly			
	305	310	315	320
	Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro			
		325	330	335

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
 340 345 350
 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 355 360 365
 Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
 370 375 380
 Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 385 390 395 400
 Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
 405 410 415
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430
 Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 140
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)

<400> 140
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg

[0296]

275 280 285
 Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 340 345 350
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 355 360 365
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 370 375 380
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 385 390 395 400
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 405 410 415
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 420 425 430
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440

<210> 141
 <211> 440
 <212> PRT
 <213> 人工合成(Artificial)

[0297]

<400> 141
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 115 120 125
 Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
 180 185 190
 Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
 210 215 220

Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 225 230 235 240
 Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 245 250 255
 Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
 260 265 270
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 275 280 285
 Phe Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 290 295 300
 Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
 305 310 315 320
 Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 325 330 335
 Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
 340 345 350
 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 355 360 365
 Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
 370 375 380
 Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 385 390 395 400
 Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
 405 410 415
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430
 Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

[0298]

<210> 142
 <211> 439
 <212> PRT
 <213> 人工合成(Artificial)

<400> 142
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 115 120 125
 Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr

	165	170	175
	Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln		
	180	185	190
	Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp		
	195	200	205
	Lys Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala		
	210	215	220
	Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys		
	225	230	235
	Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val		240
	245	250	255
	Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp		
	260	265	270
	Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe		
	275	280	285
	Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp		
	290	295	300
	Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu		
	305	310	315
	Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg		320
	325	330	335
	Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys		
	340	345	350
	Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp		
	355	360	365
	Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys		
	370	375	380
[0299]	Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser		
	385	390	395
	Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser		400
	405	410	415
	Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser		
	420	425	430
	Leu Ser Leu Ser Pro Gly Lys		
	435		
	<210> 143		
	<211> 443		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 143		
	Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr		15
	20	25	30
	Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile		
	35	40	45
	Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe		
	50	55	60
	Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr		
	65	70	75
	Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys		80
	85	90	95
	Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser		
	100	105	110

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 275 280 285
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 [0300] Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 340 345 350
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 355 360 365
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 370 375 380
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 385 390 395 400
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 405 410 415
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 420 425 430
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440

<210> 144
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)

<400> 144
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe

	50	55	60	
	Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr			
	65	70	75	80
	Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys			
		85	90	95
	Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser			
	100	105	110	
	Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser			
	115	120	125	
	Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp			
	130	135	140	
	Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr			
	145	150	155	160
	Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr			
		165	170	175
	Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln			
		180	185	190
	Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp			
	195	200	205	
	Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro			
	210	215	220	
	Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro			
	225	230	235	240
	Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr			
		245	250	255
	Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn			
		260	265	270
[0301]	Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg			
	275	280	285	
	Glu Glu Thr Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val			
	290	295	300	
	Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser			
	305	310	315	320
	Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys			
		325	330	335
	Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp			
	340	345	350	
	Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe			
	355	360	365	
	Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu			
	370	375	380	
	Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe			
	385	390	395	400
	Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly			
		405	410	415
	Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr			
		420	425	430
	Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys			
	435	440		
	<210> 145			
	<211> 443			
	<212> PRT			
	<213> 人工合成(Artificial)			
	<400> 145			

	Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr		15
		20	25
	Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile		30
		35	40
	Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe		45
		50	55
	Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr		60
	65	70	75
	Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys		80
		85	90
	Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser		95
		100	105
	Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser		110
		115	120
	Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp		125
		130	135
	Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr		140
	145	150	155
	Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr		160
		165	170
	Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln		175
		180	185
	Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp		190
		195	200
	Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro		205
		210	215
[0302]	Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro		220
	225	230	235
	Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr		240
		245	250
	Cys Val Val Val Asp Ser His Glu Asp Pro Glu Val Lys Phe Asn		255
		260	265
	Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg		270
		275	280
	Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val		285
		290	295
	Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser		300
	305	310	315
	Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Ala Ala Lys		320
		325	330
	Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp		335
		340	345
	Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe		350
		355	360
	Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu		365
		370	375
	Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe		380
	385	390	395
	Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly		400
		405	410
	Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr		415
		420	425
	Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys		430
		435	440

	Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly		
	405	410	415
	Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr		
	420	425	430
	Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys		
	435	440	
	<210> 147		
	<211> 443		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 147		
	Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr		15
	20	25	30
	Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile		
	35	40	45
	Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe		
	50	55	60
	Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr		80
	65	70	75
	Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys		
	85	90	95
	Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser		
	100	105	110
[0304]	Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser		
	115	120	125
	Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp		
	130	135	140
	Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr		
	145	150	155
	Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr		160
	165	170	175
	Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln		
	180	185	190
	Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp		
	195	200	205
	Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro		
	210	215	220
	Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro		
	225	230	235
	Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr		240
	245	250	255
	Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn		
	260	265	270
	Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg		
	275	280	285
	Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val		
	290	295	300
	Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser		
	305	310	315
	Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys		320
	325	330	335
	Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp		

	340	345	350
	Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe		
	355	360	365
	Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu		
	370	375	380
	Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe		
	385	390	395
	Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly		
	405	410	415
	Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr		
	420	425	430
	Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys		
	435	440	
	<210> 148		
	<211> 449		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 148		
	Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		
	20	25	30
	Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		
	35	40	45
	Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
	50	55	60
[0305]	Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		
	65	70	75
	Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		
	85	90	95
	Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
	100	105	110
	Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
	115	120	125
	Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu		
	130	135	140
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
	145	150	155
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
	165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
	180	185	190
	Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro		
	195	200	205
	Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
	210	215	220
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro		
	225	230	235
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
	245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
	260	265	270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
	275	280	285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

- <210> 149
- <211> 446
- <212> PRT
- <213> 人工合成(Artificial)

[0306]

<400> 149
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro

	210	215	220	
	Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe			
	225	230	235	240
	Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro			
		245	250	255
	Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val			
		260	265	270
	Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr			
		275	280	285
	Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val			
		290	295	300
	Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys			
	305	310	315	320
	Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser			
		325	330	335
	Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro			
		340	345	350
	Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val			
		355	360	365
	Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly			
		370	375	380
	Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp			
	385	390	395	400
	Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp			
		405	410	415
	Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His			
		420	425	430
[0307]	Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys			
		435	440	445

- <210> 150
- <211> 449
- <212> PRT
- <213> 人工合成(Artificial)

<400>	150
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala	
1	5 10 15
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr	
	20 25 30
Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile	
	35 40 45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe	
	50 55 60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr	
65	70 75 80
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys	
	85 90 95
Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly	
	100 105 110
Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe	
	115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu	
	130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp	
145	150 155 160

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

[0308]

<210> 151
 <211> 446
 <212> PRT
 <213> 人工合成(Artificial)

<400> 151
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys

	85	90	95
	Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
	100	105	110
	Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
	115	120	125
	Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu		
	130	135	140
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
	145	150	155
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		160
	165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
	180	185	190
	Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro		
	195	200	205
	Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro		
	210	215	220
	Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe		
	225	230	235
	Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro		240
	245	250	255
	Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val		
	260	265	270
	Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr		
	275	280	285
	Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val		
	290	295	300
[0309]	Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys		
	305	310	315
	Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser		320
	325	330	335
	Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro		
	340	345	350
	Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val		
	355	360	365
	Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly		
	370	375	380
	Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp		
	385	390	395
	Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp		400
	405	410	415
	Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His		
	420	425	430
	Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		
	435	440	445
	<210> 152		
	<211> 445		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 152		
	Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		15
	20	25	30

Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285
 Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 385 390 395 400
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445

 <210> 153
 <211> 449
 <212> PRT

<213> 人工合成(Artificial)

<400> 153

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu

[0311]

	420	425	430
	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly		
	435	440	445
	Lys		
<210>	154		
<211>	449		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	154		
	Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
	1	5	10
	Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		15
	20	25	30
	Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		
	35	40	45
	Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
	50	55	60
	Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		80
	65	70	75
	Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		
	85	90	95
	Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
	100	105	110
	Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
	115	120	125
[0312]	Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu		
	130	135	140
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
	145	150	155
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		160
	165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
	180	185	190
	Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro		
	195	200	205
	Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
	210	215	220
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro		
	225	230	235
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		240
	245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
	260	265	270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
	275	280	285
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val		
	290	295	300
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
	305	310	315
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys		320
	325	330	335
	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
	340	345	350

Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

<210> 155
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

[0313] <400> 155
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn

275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

<210> 156
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

[0314]

<400> 156
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205

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

[0315]

- <210> 157
- <211> 449
- <212> PRT
- <213> 人工合成(Artificial)

<400> 157
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu

	130	135	140	
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp			
	145	150	155	160
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu			
		165	170	175
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser			
	180	185		190
	Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro			
	195	200	205	
	Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys			
	210	215	220	
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro			
	225	230	235	240
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
		245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
	260	265		270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
	275	280	285	
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val			
	290	295	300	
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
	305	310	315	320
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
		325	330	335
	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
	340	345		350
[0316]	Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
	355	360	365	
	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
	370	375	380	
	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
	385	390	395	400
	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
		405	410	415
	Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
	420	425		430
	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
	435	440	445	
	Lys			

<210> 158
 <211> 236
 <212> PRT
 <213> 人工合成(Artificial)

<400> 158
 Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
 1 5 10 15
 Phe Pro Gly Ser Arg Cys Asp Ile Val Met Thr Gln Ser His Lys Phe
 20 25 30
 Met Ser Thr Ser Val Gly Asp Arg Val Asn Ile Thr Cys Lys Ala Ser
 35 40 45
 Gln Gly Val Gly Thr Ala Val Gly Trp Tyr Gln Gln Lys Pro Gly Gln
 50 55 60

Ser Pro Arg Leu Leu Ile Tyr Trp Ala Ser Thr Arg His Thr Gly Val
 65 70 75 80
 Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Ala
 85 90 95
 Ile Ser Asn Val Gln Ser Glu Asp Leu Ala Asp Tyr Phe Cys Gln Gln
 100 105 110
 Tyr Ser Thr Tyr Pro Phe Thr Phe Gly Gly Gly Thr Asn Leu Glu Ile
 115 120 125
 Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
 130 135 140
 Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
 145 150 155 160
 Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu
 165 170 175
 Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp
 180 185 190
 Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr
 195 200 205
 Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser
 210 215 220
 Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 159
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

[0317]

<400> 159
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys

	210	215	220	
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro			
	225	230	235	240
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
		245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
		260	265	270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
		275	280	285
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val			
		290	295	300
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
	305	310	315	320
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
		325	330	335
	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
		340	345	350
	Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
		355	360	365
	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
		370	375	380
	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
	385	390	395	400
	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
		405	410	415
	Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
		420	425	430
[0318]	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Pro Gly			
		435	440	445
	Lys			

<210> 160

<211> 446

<212> PRT

<213> 人工合成(Artificial)

<400> 160

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala	
1	5 10 15
Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr	
	20 25 30
Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile	
	35 40 45
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe	
	50 55 60
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr	
65	70 75 80
Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys	
	85 90 95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly	
	100 105 110
Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe	
	115 120 125
Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu	
	130 135 140

	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
	145	150	155
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		160
		165	170
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		175
		180	185
	Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro		190
		195	200
	Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro		205
		210	215
	Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe		220
	225	230	235
	Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro		240
		245	250
	Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val		255
		260	265
	Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr		270
		275	280
	Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val		285
		290	295
	Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys		300
	305	310	315
	Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser		320
		325	330
	Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro		335
		340	345
	Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val		350
		355	360
[0319]	Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly		365
		370	375
	Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp		380
	385	390	395
	Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp		400
		405	410
	Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His		415
		420	425
	Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		430
		435	440
			445
	<210> 161		
	<211> 449		
	<212> PRT		
	<213> 人工合成(Artificial)		
	<400> 161		
	Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala		
	1	5	10
	Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr		15
		20	25
	Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		30
		35	40
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe		45
		50	55
	Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr		60
	65	70	75
	Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys		80

Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly 85 90 95
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

[0320]

- <210> 162
- <211> 446
- <212> PRT
- <213> 人工合成(Artificial)

<400> 162
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 [0321] Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 163
 <211> 445

<212> PRT
 <213> 人工合成(Artificial)

<400> 163
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285
 Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 385 390 395 400
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

[0322]

	Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn	
	420 425 430	
	His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	
	435 440 445	
	<210> 164	
	<211> 449	
	<212> PRT	
	<213> 人工合成(Artificial)	
	<400> 164	
	Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala	
	1 5 10 15	
	Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr	
	20 25 30	
	Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile	
	35 40 45	
	Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe	
	50 55 60	
	Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr	
	65 70 75 80	
	Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys	
	85 90 95	
	Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly	
	100 105 110	
	Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe	
	115 120 125	
[0323]	Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu	
	130 135 140	
	Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp	
	145 150 155 160	
	Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu	
	165 170 175	
	Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser	
	180 185 190	
	Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro	
	195 200 205	
	Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys	
	210 215 220	
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro	
	225 230 235 240	
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser	
	245 250 255	
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp	
	260 265 270	
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn	
	275 280 285	
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val	
	290 295 300	
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu	
	305 310 315 320	
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys	
	325 330 335	
	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr	
	340 345 350	
	Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr	

355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

<210> 165
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

[0324] <400> 165
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285

Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

- <210> 166
- <211> 449
- <212> PRT
- <213> 人工合成(Artificial)

[0325]

<400> 166
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys

	210	215	220	
	Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro			
	225	230	235	240
	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
		245	250	255
	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
		260	265	270
	Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
		275	280	285
	Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val			
		290	295	300
	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
	305	310	315	320
	Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
		325	330	335
	Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
		340	345	350
	Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
		355	360	365
	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
		370	375	380
	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
	385	390	395	400
	Asp Ser Asp Gly Ser Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
		405	410	415
	Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
		420	425	430
[0326]	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
		435	440	445
	Lys			

<210> 167
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

<400> 167
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140

Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Ala Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 [0327] Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys

<210> 168
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)

<400> 168
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr

65	70	75	80
Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys			
	85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
	100	105	110
Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe			
	115	120	125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu			
	130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp			
145	150	155	160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu			
	165	170	175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser			
	180	185	190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro			
	195	200	205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys			
	210	215	220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro			
225	230	235	240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
	245	250	255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp			
	260	265	270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
	275	280	285
[0328] Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val			
	290	295	300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
305	310	315	320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
	325	330	335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
	340	345	350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
	355	360	365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
	370	375	380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
385	390	395	400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
	405	410	415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
	420	425	430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
	435	440	445
Lys			

<210> 169

<211> 111

<212> PRT

<213> 人工合成(Artificial)

<400> 169

Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 170
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0329]

<400> 170
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Asn Ser Ser
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 171
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 171
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asp His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 172
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 172
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Glu Ser Val Ser Ser Arg
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 173
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0330] <400> 173
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Asn
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 174
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 174
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Arg Ser Ser
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp

50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 175
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 175
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Arg Ser Val Arg Ser Asn
 20 25 30
 Gly Tyr Asn His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Phe Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

[0331]

<210> 176
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 176
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Arg Ser Asn
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 177
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 177

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Asn
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 178
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 178
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Asn
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

[0332]

<210> 179
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 179
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Arg
 20 25 30
 Gly Tyr Asn His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 180
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 180
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Glu Ser Asn
 20 25 30
 Gly Tyr Asp Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 181
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

[0333] <400> 181
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Asn Ile Asn
 20 25 30
 Gly Tyr Asp Tyr Leu Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 182
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)

<400> 182
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Gly Ser Ser
 20 25 30
 Gly Tyr Asn Trp Leu Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp

	50		55		60														
	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser			
	65							70					75					80	
	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg			
																			95
	Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
					100					105									110

<210> 183
 <211> 5
 <212> PRT
 <213> 人工合成(Artificial)

<400> 183
 Asn Tyr Trp Ile Asn
 1 5

<210> 184
 <211> 17
 <212> PRT
 <213> 人工合成(Artificial)

<400> 184
 Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe Lys
 1 5 10 15
 Asp

[0334]

<210> 185
 <211> 11
 <212> PRT
 <213> 人工合成(Artificial)

<400> 185
 Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr
 1 5 10

<210> 186
 <211> 15
 <212> PRT
 <213> 人工合成(Artificial)

<400> 186
 Arg Ala Ser Gln Ser Val Arg Ser Ser Gly Tyr Asn Trp Ile Phe
 1 5 10 15

<210> 187
 <211> 7
 <212> PRT
 <213> 人工合成(Artificial)

<400> 187
 Leu Ala Ser Asn Arg Asp Ser
 1 5

<210> 188

- <211> 6
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 188
 Gln His Ser Arg Glu Leu
 1 5
- <210> 189
 <211> 15
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 189
 Arg Ala Ser Lys Ser Val Ser Ser Ser Gly Tyr Asn Tyr Ile Phe
 1 5 10 15
- <210> 190
 <211> 7
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 190
 Leu Ala Ser Asn Leu Asp Ser
 1 5
- [0335] <210> 191
 <211> 7
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 191
 Gln Glu Ser Arg Glu Leu Pro
 1 5
- <210> 192
 <211> 15
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 192
 Arg Ala Ser Lys Ser Val Ser Ser Ser Gly Tyr Asn Tyr Ile Phe
 1 5 10 15
- <210> 193
 <211> 7
 <212> PRT
 <213> 人工合成(Artificial)
- <400> 193
 Leu Ala Ser Asn Leu Asp Ser
 1 5
- <210> 194
 <211> 7
 <212> PRT

<213> 人工合成(Artificial)

<400> 194

Gln Glu Ser Trp Glu Leu Pro

1 5

<210> 195

<211> 5

<212> PRT

<213> 人工合成(Artificial)

<400> 195

Ser Phe Ser Met Ser

1 5

<210> 196

<211> 17

<212> PRT

<213> 人工合成(Artificial)

<400> 196

Thr Ile Asn Ser Asp Gly Ser Asn Thr Tyr Glu Pro Gly Asn Met Lys

1 5 10 15

Gly

<210> 197

<211> 9

<212> PRT

<213> 人工合成(Artificial)

<400> 197

Asp Pro Asn Trp Asp Tyr Phe Asp Phe

1 5

<210> 198

<211> 11

<212> PRT

<213> 人工合成(Artificial)

<400> 198

Lys Ala Ser Gln Asp Ile Asn Ser Tyr Leu Thr

1 5 10

<210> 199

<211> 7

<212> PRT

<213> 人工合成(Artificial)

<400> 199

Arg Ala Asn Arg Leu Val Asp

1 5

<210> 200

<211> 7

<212> PRT

[0336]

<213> 人工合成(Artificial)

<400> 200

Leu Gln Tyr Asp Glu Phe Pro
1 5

<210> 201

<211> 15

<212> PRT

<213> 人工合成(Artificial)

<400> 201

Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Phe Ser Phe Met Asn
1 5 10 15

<210> 202

<211> 7

<212> PRT

<213> 人工合成(Artificial)

<400> 202

Ala Val Phe Asn Gln Gly Ser
1 5

<210> 203

<211> 7

<212> PRT

[0337]

<213> 人工合成(Artificial)

<400> 203

Gln Gln Thr Lys Glu Val Pro
1 5

<210> 204

<211> 5

<212> PRT

<213> 人工合成(Artificial)

<400> 204

Ser Phe Thr Ile His
1 5

<210> 205

<211> 17

<212> PRT

<213> 人工合成(Artificial)

<400> 205

Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe Lys
1 5 10 15
Asp

<210> 206

<211> 9

<212> PRT

- <213> 人工合成(Artificial)
- <400> 206
Gly Asp Asp Gly Tyr Tyr Glu Val Tyr
1 5
- <210> 207
<211> 15
<212> PRT
<213> 人工合成(Artificial)
- <400> 207
Arg Ala Ser Glu Ser Val Asp Ser Tyr Gly Asn Ser Tyr Leu His
1 5 10 15
- <210> 208
<211> 7
<212> PRT
<213> 人工合成(Artificial)
- <400> 208
Leu Val Ser Asn Leu Glu Ser
1 5
- [0338] <210> 209
<211> 7
<212> PRT
<213> 人工合成(Artificial)
- <400> 209
Gln Gln Asn Asn Glu Tyr Pro
1 5
- <210> 210
<211> 5
<212> PRT
<213> 人工合成(Artificial)
- <400> 210
Gly Tyr Ser Val Asn
1 5
- <210> 211
<211> 16
<212> PRT
<213> 人工合成(Artificial)
- <400> 211
Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys Ser
1 5 10 15
- <210> 212
<211> 7
<212> PRT
<213> 人工合成(Artificial)

<400> 212
Gly Ala Gly Tyr Phe Asp Tyr
1 5

<210> 213
<211> 11
<212> PRT
<213> 人工合成(Artificial)

<400> 213
Lys Ala Ser Gln Asp Ile Asn Ser Tyr Leu Thr
1 5 10

<210> 214
<211> 7
<212> PRT
<213> 人工合成(Artificial)

<400> 214
Arg Ala Asn Arg Leu Val Asp
1 5

<210> 215
<211> 7
<212> PRT
<213> 人工合成(Artificial)

[0339] <400> 215
Leu Gln Tyr Asp Glu Phe Pro
1 5

<210> 216
<211> 5
<212> PRT
<213> 人工合成(Artificial)

<400> 216
Ser Phe Ser Met Ser
1 5

<210> 217
<211> 17
<212> PRT
<213> 人工合成(Artificial)

<400> 217
Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met Lys
1 5 10 15
Gly

<210> 218
<211> 9
<212> PRT
<213> 人工合成(Artificial)

<400> 218
Asp Pro Asn Trp Asp Tyr Phe Asp Phe
1 5

<210> 219
<211> 15
<212> PRT
<213> 人工合成(Artificial)

<400> 219
Arg Ala Ser Lys Ser Val Ser Ser Ser Gly Tyr Asn Tyr Ile Phe
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Ser Ser Val Ser Ser Ser Tyr Leu Tyr Trp Tyr Gln Gln Lys Pro Gly
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Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu
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Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala
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Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys
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Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp
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Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser		
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	195	200
Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr		
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Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp					
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Glu Trp Ile Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala					

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Thr Ala Tyr Leu His	Leu Ser Ser Leu Thr	Ser Glu Asp Thr Ala	Val
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	130	135	140
Pro Cys Ser Arg Ser	Thr Ser Glu Ser Thr	Ala Ala Leu Gly Cys	Leu
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Val Lys Asp Tyr Phe	Pro Glu Pro Val Thr	Val Ser Trp Asn Ser	Gly
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Ala Leu Thr Ser Gly	Val His Thr Phe Pro	Ala Val Leu Gln Ser	Ser
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Gly Leu Tyr Ser Leu	Ser Ser Val Val Thr	Val Pro Ser Ser Ser	Leu
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Gly Thr Lys Thr Tyr	Thr Cys Asn Val Asp	His Lys Pro Ser Asn	Thr
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Lys Val Asp Lys Arg	Val Glu Ser Lys Tyr	Gly Pro Pro Cys Pro	Pro
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Cys Pro Ala Pro Glu	Phe Leu Gly Gly Pro	Ser Val Phe Leu Phe	Pro
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Cys Val Val Val Asp	Val Ser Gln Glu Asp	Pro Glu Val Gln Phe	Asn
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Trp Tyr Val Asp Gly	Val Glu Val His Asn	Ala Lys Thr Lys Pro	Arg
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Glu Glu Gln Phe Asn	Ser Thr Tyr Arg Val	Val Ser Val Leu Thr	Val
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Leu His Gln Asp Trp	Leu Asn Gly Lys Glu	Tyr Lys Cys Lys Val	Ser
	325	330	335
Asn Lys Gly Leu Pro	Ser Ser Ile Glu Lys	Thr Ile Ser Lys Ala	Lys
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Gly Gln Pro Arg Glu	Pro Gln Val Tyr Thr	Leu Pro Pro Ser Gln	Glu
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Glu Met Thr Lys Asn	Gln Val Ser Leu Thr	Cys Leu Val Lys Gly	Phe
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 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Lys Thr Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala Tyr
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 Met Gln Leu Asn Gly Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr
 100 105 110
 Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
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 Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
 130 135 140
 Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
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 Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
 165 170 175
 Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
 180 185 190
 Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
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 Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
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 His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
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 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
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 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
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 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
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 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
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 Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
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 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
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 Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
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 Thr Ser Phe Thr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
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65					70					75									80
Pro Lys Phe Lys Asp Lys Thr Thr Leu Thr Ala Asp Lys Ser Ser Gly																			
					85					90									95
Thr Ala Tyr Met Gln Leu Asn Gly Leu Thr Ser Glu Asp Ser Ala Val																			
					100					105									110
Tyr Tyr Cys Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly																			
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Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser																			
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Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala																			
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Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val																			
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Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala																			
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Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val																			
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Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His																			
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Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr																			
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Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr																			
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					355					360									365
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	405	410
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser		415
	420	425
Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala		430
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	35	40
Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ala		45
	50	55
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65	70	75
Pro Val Glu Thr Asp Asp Ala Ala Thr Tyr Phe Cys Gln Gln Asn Asn		80
	85	90
Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg		95
	100	105
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln		110
	115	120
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr		125
	130	135
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser		140
145	150	155
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr		160
	165	170
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys		175

	180		185		190
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Gly Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys					
	50		55		60
Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln Leu Phe Leu					
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Lys Val Asn Ser Leu Gln Thr Asp Asp Thr Ala Lys Tyr Phe Cys Thr					
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Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr					
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Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro					
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Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val					
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Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala					
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Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly					
	165		170		175
Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly					
	180		185		190
Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys					
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Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys					
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Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser
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Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys
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Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly
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Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln
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Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn
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Thr	Gly	Tyr	Ser	Val	Asn	Trp	Val	Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu

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Ala Leu Lys Ser Arg Leu Ser Ile Thr Lys Asp Asn Ser Lys Ser Gln		
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Phe Cys Thr Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr		
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Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn		
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Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser		
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Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys		
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Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu		
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Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu		
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Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys		
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Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu		
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Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys		
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Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys		
	340	345
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser		
355	360	365

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 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 385 390 395 400
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 405 410 415
 Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
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 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
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 Ser Gly Ser Gly Gln Asp Tyr Ser Leu Thr Ile Ser Ser Leu Glu Tyr
 65 70 75 80
 Glu Asp Leu Gly Ile Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
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 Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110
 Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125
 Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140
 Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160
 Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
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 Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
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 Phe Asn Arg Gly Glu Cys
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 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Met Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
 115 120 125
 Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly
 130 135 140
 Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
 145 150 155 160
 Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
 165 170 175
 Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
 180 185 190
 Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser
 195 200 205
 Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr
 210 215 220

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
 225 230 235 240
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 245 250 255
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
 260 265 270
 Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 275 280 285
 Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
 290 295 300
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 305 310 315 320
 Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
 325 330 335
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 340 345 350
 Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
 355 360 365
 Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 370 375 380
 Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
 385 390 395 400
 Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
 405 410 415
 Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 420 425 430
 Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445
 <210> 12
 <211> 464
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 12
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln
 20 25 30
 Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
 35 40 45

Ser Ser Phe Ser Met Ser Trp Ile Arg Gln Thr Pro Asp Lys Arg Leu
 50 55 60
 Glu Val Val Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro
 65 70 75 80
 Asp Asn Met Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn
 85 90 95
 Thr Leu Tyr Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Met
 100 105 110
 Tyr Tyr Cys Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly
 115 120 125
 Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
 130 135 140
 Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
 145 150 155 160
 Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
 165 170 175
 Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
 180 185 190
 Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
 195 200 205
 Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His
 210 215 220
 Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly
 225 230 235 240
 Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser
 245 250 255
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 260 265 270
 Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
 275 280 285
 Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 290 295 300
 Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
 305 310 315 320
 Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 325 330 335
 Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
 340 345 350
 Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu

355	360	365
Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys		
370	375	380
Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser		
385	390	395
Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp		
405	410	415
Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser		
420	425	430
Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala		
435	440	445
Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		
450	455	460
<210> 13		
<211> 217		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 13		
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly		
1	5	10
Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Lys Ser Val Ser Ser Ser		
20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro		
35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Ala		
50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His		
65	70	75
Pro Val Glu Glu Glu Asp Ala Ala Thr Tyr Tyr Cys Gln His Ser Arg		
85	90	95
Glu Leu Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr		
100	105	110
Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu		
115	120	125
Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro		
130	135	140
Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly		
145	150	155
Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr		

	165		170		175										
Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys	His
			180						185				190		
Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro	Val
			195						200				205		
Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys							
	210								215						
<210>	14														
<211>	449														
<212>	PRT														
<213>	人工合成 (Artificial)														
<400>	14														
Gln	Val	Gln	Leu	Gln	Gln	Pro	Gly	Thr	Glu	Leu	Val	Arg	Pro	Gly	Ala
1			5						10					15	
Ser	Val	Lys	Leu	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
			20						25					30	
Trp	Ile	Asn	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile
			35						40					45	
Ala	Met	Ile	Asp	Pro	Ser	Asp	Ser	Glu	Thr	His	Tyr	Asn	Gln	Ile	Phe
	50								55					60	
Lys	Asp	Lys	Ala	Thr	Leu	Thr	Val	Asp	Lys	Ser	Ser	Asn	Thr	Ala	Tyr
65									70					75	80
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Gly	Asp	Ser	Ala	Val	Tyr	Tyr	Cys
									85					90	95
Ala	Met	Asp	Tyr	Gly	Ser	Leu	Tyr	Ala	Met	Asp	Tyr	Trp	Gly	Arg	Gly
									100					105	110
Thr	Ser	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
									115					120	125
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
									130					135	140
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145									150					155	160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
									165					170	175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
									180					185	190
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
									195					200	205
Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys

210	215	220
Thr His Thr Cys Pro	Pro Cys Pro Ala Pro	Glu Leu Leu Gly Gly Pro
225	230	235
Ser Val Phe Leu Phe	Pro Pro Lys Pro Lys	Asp Thr Leu Met Ile Ser
245	250	255
Arg Thr Pro Glu Val	Thr Cys Val Val Val	Asp Val Ser His Glu Asp
260	265	270
Pro Glu Val Lys Phe	Asn Trp Tyr Val Asp	Gly Val Glu Val His Asn
275	280	285
Ala Lys Thr Lys Pro	Arg Glu Glu Gln Tyr	Asn Ser Thr Tyr Arg Val
290	295	300
Val Ser Val Leu Thr	Val Leu His Gln Asp	Trp Leu Asn Gly Lys Glu
305	310	315
Tyr Lys Cys Lys Val	Ser Asn Lys Ala Leu	Pro Ala Pro Ile Glu Lys
325	330	335
Thr Ile Ser Lys Ala	Lys Gly Gln Pro Arg	Glu Pro Gln Val Tyr Thr
340	345	350
Leu Pro Pro Ser Arg	Asp Glu Leu Thr Lys	Asn Gln Val Ser Leu Thr
355	360	365
Cys Leu Val Lys Gly	Phe Tyr Pro Ser Asp	Ile Ala Val Glu Trp Glu
370	375	380
Ser Asn Gly Gln Pro	Glu Asn Asn Tyr Lys	Thr Thr Pro Pro Val Leu
385	390	395
Asp Ser Asp Gly Ser	Phe Phe Leu Tyr Ser	Lys Leu Thr Val Asp Lys
405	410	415
Ser Arg Trp Gln Gln	Gly Asn Val Phe Ser	Cys Ser Val Met His Glu
420	425	430
Ala Leu His Asn His	Tyr Thr Gln Lys Ser	Leu Ser Leu Ser Pro Gly
435	440	445

Lys

<210> 15

<211> 465

<212> PRT

<213> 人工合成(Artificial)

<400> 15

Met Glu Phe Gly Leu	Ser Trp Leu Phe Leu	Val Ala Ile Leu Lys Gly
1	5	10
Val Gln Cys Gln Val	Gln Leu Gln Gln Pro	Gly Thr Glu Leu Val Arg
20	25	30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45
 Thr Asn Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
 50 55 60
 Glu Trp Ile Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn
 65 70 75 80
 Gln Ile Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn
 85 90 95
 Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp
 115 120 125
 Gly Arg Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
 130 135 140
 Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr
 145 150 155 160
 Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
 165 170 175
 Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
 180 185 190
 Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
 195 200 205
 Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp
 210 215 220
 His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr
 225 230 235 240
 Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro
 245 250 255
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 260 265 270
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp
 275 280 285
 Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 290 295 300
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
 305 310 315 320
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 325 330 335
 Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys

	340		345		350														
Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr				
	355						360					365							
Leu	Pro	Pro	Ser	Gln	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr				
	370						375					380							
Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu				
385					390						395				400				
Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu				
			405						410					415					
Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Arg	Leu	Thr	Val	Asp	Lys				
			420						425					430					
Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu				
	435							440					445						
Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Leu	Gly				
	450						455						460						
Lys																			
465																			
<210>	16																		
<211>	214																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	16																		
Asp	Ile	Val	Met	Thr	Gln	Ser	His	Lys	Phe	Val	Ser	Thr	Ser	Val	Gly				
1			5					10						15					
Asp	Arg	Val	Asn	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Val	Ser	Arg	Ala				
			20					25						30					
Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ser	Pro	Lys	Leu	Leu	Ile				
			35					40						45					
Tyr	Trp	Ala	Ser	Thr	Arg	His	Thr	Gly	Val	Pro	Asp	Arg	Phe	Thr	Gly				
			50					55						60					
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Val	Gln	Ala				
65								70						75					80
Asp	Asp	Leu	Ala	Leu	Phe	Tyr	Cys	Gln	Gln	His	Tyr	Ser	Thr	Pro	Trp				
														85					
Thr	Phe	Ala	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Arg	Arg	Thr	Val	Ala	Ala				
														100					
Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly				
														115					
Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala				

	180		185		190														
Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn				
	195							200				205							
His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser				
	210						215					220							
Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu				
225					230					235					240				
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu				
				245						250					255				
Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser				
				260						265					270				
His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu				
				275						280					285				
Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr				
				290											300				
Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn				
305						310								315					320
Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro				
						325									330				335
Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln				
				340											345				350
Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val				
															355				360
Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val				
															370				375
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro				
385															390				395
Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr				
															405				410
Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val				
															420				425
Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu				
															435				440
Ser	Pro	Gly	Lys																
															445				
															450				
<210>	18																		
<211>	468																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		

<400> 18
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
 20 25 30
 Pro Gly Ala Ser Val Trp Leu Ser Cys Lys Ala Ser Gly Tyr Ser Phe
 35 40 45
 Thr Thr Tyr Trp Met Ser Trp Val Lys Gln Arg Pro Gly Gln Arg Leu
 50 55 60
 Glu Trp Ile Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn
 65 70 75 80
 Gln Arg Phe Lys Asp Lys Val Thr Leu Thr Val Asp Lys Ser Ser Asn
 85 90 95
 Thr Val Tyr Leu Gln Leu Asn Ser Pro Thr Ser Glu Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe
 115 120 125
 Gly Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Ser Thr
 130 135 140
 Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser
 145 150 155 160
 Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
 165 170 175
 Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
 180 185 190
 Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
 195 200 205
 Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys
 210 215 220
 Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu
 225 230 235 240
 Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu
 245 250 255
 Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 260 265 270
 Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 275 280 285
 Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu
 290 295 300

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr
 305 310 315 320
 Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 325 330 335
 Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser
 340 345 350
 Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 355 360 365
 Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val
 370 375 380
 Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 385 390 395 400
 Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 405 410 415
 Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr
 420 425 430
 Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val
 435 440 445
 Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 450 455 460
 Ser Leu Gly Lys
 465
 <210> 19
 <211> 111
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 19
 Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
 20 25 30
 Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
 35 40 45
 Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Ile Pro Ala
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95

Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 20

<211> 111

<212> PRT

<213> 人工合成(Artificial)

<400> 20

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
 20 25 30

Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
 35 40 45

Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Ile Pro Ala
 50 55 60

Arg Phe Ser Ala Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80

Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95

Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 21

<211> 111

<212> PRT

<213> 人工合成(Artificial)

<400> 21

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Asp Asn Tyr
 20 25 30

Gly Phe Ser Phe Met Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
 35 40 45

Arg Leu Leu Ile Tyr Ala Val Phe Asn Gln Gly Ser Gly Val Pro Ala
 50 55 60

Arg Phe Ser Ala Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80

Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Lys
 85 90 95

Glu Val Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

	100	105	110
<210>	22		
<211>	118		
<212>	PRT		
<213>	人工合成 (Artificial)		
<400>	22		
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
1	5	10	15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe			
	20	25	30
Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met			
	35	40	45
Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe			
	50	55	60
Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
65	70	75	80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
	85	90	95
Ala Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr			
	100	105	110
Leu Val Thr Val Ser Ser			
	115		

<210> 23

<211> 118

<212> PRT

<213> 人工合成 (Artificial)

<400> 23

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
1	5	10	15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe			
	20	25	30
Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met			
	35	40	45
Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe			
	50	55	60
Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
65	70	75	80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
	85	90	95

Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 24
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 24
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30
 Thr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Thr Asp Lys Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Asn Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Val Arg Gly Asp Asp Gly Tyr Tyr Glu Val Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 25
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 25
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30
 Thr Ile His Trp Val Arg Gln Arg Pro Gly Gln Gly Leu Ile Trp Ile
 35 40 45
 Gly Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Ala Asp Lys Ser Thr Gly Thr Ala Tyr

65					70						75				80
Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
					85				90					95	
Val	Arg	Gly	Asp	Asp	Gly	Tyr	Tyr	Glu	Val	Tyr	Trp	Gly	Gln	Gly	Thr
			100					105					110		
Leu	Val	Thr	Val	Ser	Ser										
			115												
<210>	26														
<211>	118														
<212>	PRT														
<213>	人工合成(Artificial)														
<400>	26														
Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala
1				5					10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Thr	Ser	Gly	Tyr	Thr	Phe	Thr	Ser	Phe
			20					25					30		
Thr	Ile	His	Trp	Val	Arg	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Ile	Trp	Ile
			35				40					45			
Gly	Tyr	Ile	Asn	Pro	Ser	Leu	Gly	Tyr	Thr	Asp	Tyr	Asn	Pro	Lys	Phe
	50					55					60				
Lys	Asp	Arg	Val	Thr	Met	Thr	Ala	Asp	Lys	Ser	Thr	Gly	Thr	Ala	Tyr
65					70						75				80
Met	Glu	Leu	Asn	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
					85				90					95	
Val	Arg	Gly	Asp	Asp	Gly	Tyr	Tyr	Glu	Val	Tyr	Trp	Gly	Gln	Gly	Thr
			100					105					110		
Leu	Val	Thr	Val	Ser	Ser										
			115												
<210>	27														
<211>	111														
<212>	PRT														
<213>	人工合成(Artificial)														
<400>	27														
Ala	Ile	Gln	Leu	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5					10					15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Glu	Ser	Val	Asp	Ser	Tyr
			20					25					30		
Gly	Asn	Ser	Tyr	Leu	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro
			35				40						45		

Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 28

<211> 111

<212> PRT

<213> 人工合成(Artificial)

<400> 28

Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro
 35 40 45
 Lys Leu Leu Ile Asn Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 29

<211> 115

<212> PRT

<213> 人工合成(Artificial)

<400> 29

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr
 20 25 30
 Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys

50	55	60
Ser Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu		
65	70	80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala		
	85	95
Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr		
	100	110
Val Ser Ser		

115

<210> 30

<211> 115

<212> PRT

<213> 人工合成(Artificial)

<400> 30

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly		
1	5	10
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr		
	20	30
Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val		
	35	45

Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys		
50	55	60

Ser Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu		
65	70	80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr		
	85	95
Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr		
	100	110

Val Ser Ser

115

<210> 31

<211> 115

<212> PRT

<213> 人工合成(Artificial)

<400> 31

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly		
1	5	10
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Val Ser Gly Tyr		
	20	30

Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60
 Ser Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Leu Tyr Leu
 65 70 75 80
 Gln Val Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr
 85 90 95
 Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
 100 105 110
 Val Ser Ser
 115
 <210> 32
 <211> 115
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 32
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Ile Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ile Ser Gly Phe Ser Leu Thr Gly Tyr
 20 25 30
 Ser Val Asn Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ile Ile Trp Ser Asp Gly Thr Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60
 Ser Arg Leu Thr Ile Ser Lys Asp Asn Ser Lys Asn Thr Leu Tyr Leu
 65 70 75 80
 Gln Val Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Thr
 85 90 95
 Arg Gly Ala Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr
 100 105 110
 Val Ser Ser
 115
 <210> 33
 <211> 107
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 33
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 34

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 34

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 35

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 35

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ser Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Ile Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 36

<211> 118

<212> PRT

<213> 人工合成(Artificial)

<400> 36

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 37

<211> 118

<212> PRT

<213> 人工合成(Artificial)

<400> 37

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 38
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 38
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 39
 <211> 118
 <212> PRT

<213> 人工合成(Artificial)

<400> 39

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Gly Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 40

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 40

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 41

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 41

Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5					10					15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Ser	Ser	Ser
			20					25						30	
Gly	Tyr	Asn	Tyr	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
		35					40					45			
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
	50					55				60					
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65					70					75					80
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
				85					90						95
Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
			100						105						110

<210> 42

<211> 119

<212> PRT

<213> 人工合成(Artificial)

<400> 42

Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala
1				5					10					15	
Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr
			20					25						30	
Trp	Ile	Asn	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
		35					40					45			
Gly	Met	Ile	Asp	Pro	Ser	Asp	Ser	Glu	Thr	His	Tyr	Asn	Gln	Ile	Phe
	50					55					60				
Lys	Asp	Arg	Val	Thr	Met	Thr	Thr	Asp	Thr	Ser	Thr	Ser	Thr	Ala	Tyr
65					70					75					80
Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90						95
Ala	Arg	Asp	Tyr	Gly	Ser	Leu	Tyr	Ala	Met	Asp	Tyr	Trp	Gly	Arg	Gly
			100						105						110
Thr	Leu	Val	Thr	Val	Ser	Ser									

<210> 43

<211> 119
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 43
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser
 115

<210> 44
 <211> 119
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 44
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser

115

<210> 45

<211> 119

<212> PRT

<213> 人工合成(Artificial)

<400> 45

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr

20 25 30

Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile

35 40 45

Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe

50 55 60

Lys Asp Arg Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys

85 90 95

Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly

100 105 110

Thr Leu Val Thr Val Ser Ser

115

<210> 46

<211> 119

<212> PRT

<213> 人工合成(Artificial)

<400> 46

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr

20 25 30

Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

35 40 45

Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe

50 55 60

Lys Asp Arg Ala Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys

	85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr	Ala Met Asp Tyr Trp Gly Arg Gly		
100	105	110	
Thr Leu Val Thr Val Ser Ser			
115			
<210> 47			
<211> 107			
<212> PRT			
<213> 人工合成(Artificial)			
<400> 47			
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly			
1 5 10 15			
Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala			
20 25 30			
Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile			
35 40 45			
Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Ser Arg Phe Ser Gly			
50 55 60			
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro			
65 70 75 80			
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp			
85 90 95			
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys			
100 105			
<210> 48			
<211> 107			
<212> PRT			
<213> 人工合成(Artificial)			
<400> 48			
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly			
1 5 10 15			
Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala			
20 25 30			
Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile			
35 40 45			
Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Ser Gly			
50 55 60			
Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro			
65 70 75 80			

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 49

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 49

Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Arg Ala
 20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
 35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Trp
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 50

<211> 122

<212> PRT

<213> 人工合成(Artificial)

<400> 50

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr
 20 25 30

Trp Met Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45

Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe
 50 55 60

Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys

	85		90		95
Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp					
	100		105		110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser					
	115		120		
<210>	51				
<211>	122				
<212>	PRT				
<213>	人工合成 (Artificial)				
<400>	51				
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala					
1	5		10		15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr					
	20		25		30
Trp Met Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile					
	35		40		45
Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe					
	50		55		60
Lys Asp Arg Val Thr Leu Thr Val Asp Lys Ser Thr Ser Thr Val Tyr					
65	70		75		80
Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys					
	85		90		95
Ala Arg Lys Glu Gly Ala Tyr Val Asn Tyr Val Tyr Phe Gly Tyr Trp					
	100		105		110
Gly Gln Gly Thr Leu Val Thr Val Ser Ser					
	115		120		
<210>	52				
<211>	122				
<212>	PRT				
<213>	人工合成 (Artificial)				
<400>	52				
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala					
1	5		10		15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Thr Tyr					
	20		25		30
Trp Met Ser Trp Val Lys Gln Ala Pro Gly Gln Arg Leu Glu Trp Ile					
	35		40		45
Gly Met Ala His Pro Ser Asn Ser Glu Thr Arg Leu Asn Gln Arg Phe					
	50		55		60

50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser		
65	70	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg		
	85	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys		
	100	110
<210> 55		
<211> 110		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 55		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly		
1	5	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser		
	20	30
Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro		
	35	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp		
	50	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser		
65	70	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg		
	85	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys		
	100	110
<210> 56		
<211> 110		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 56		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly		
1	5	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Ser Trp Ser		
	20	30
Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro		
	35	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp		
	50	60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 57

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 57

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Asn
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 58

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 58

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gly Ser Val Ser Ser Gly
 20 25 30
 Gly Tyr Asp Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser

65		70		75		80									
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
				85					90					95	
Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
				100					105					110	
<210>	59														
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<400>	59														
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1				5					10					15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Ser	Ser	Ser
				20					25					30	
Gly	Tyr	Glu	Trp	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
				35					40					45	
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
				50					55					60	
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65									70					75	
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
									85					90	
Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
				100					105					110	
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<212>	PRT														
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1				5					10					15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Glu	Ser	Ser
				20					25					30	
Gly	Tyr	Asn	Tyr	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
				35					40					45	
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
				50					55					60	
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65									70					75	
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
									85					90	
Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
				100					105					110	
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<400>	60														
Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5					10					15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Glu	Ser	Ser
				20					25					30	
Gly	Tyr	Asn	Tyr	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
				35					40					45	
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
				50					55					60	
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65									70					75	
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
									85					90	
Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
				100					105					110	

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95

Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 61

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 61

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Glu Ser Val Ser Ser Ser
 20 25 30

Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95

Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 62

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 62

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Gly
 20 25 30

Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80

Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg

	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110
<210> 63			
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<213> 人工合成(Artificial)			
<400> 63			
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110
<210> 64			
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<213> 人工合成(Artificial)			
<400> 64			
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95

Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110
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 <213> 人工合成(Artificial)
 <400> 65
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Val Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110
 <210> 66
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 66
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Tyr Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

	100	105	110
<210>	67		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	67		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Pro Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210>	68		
<211>	110		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	68		
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly			
1	5	10	15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser			
	20	25	30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro			
	35	40	45
Lys Leu Leu Ile Tyr Leu Gly Ser Tyr Leu Asp Ser Gly Val Pro Asp			
	50	55	60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser			
65	70	75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg			
	85	90	95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys			
	100	105	110

<210> 69

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 69

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Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1           5           10           15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
           20           25           30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
           35           40           45
Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Trp Gly Val Pro Asp
           50           55           60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65           70           75           80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
           85           90           95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
           100           105           110

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<210> 70

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 70

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Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1           5           10           15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
           20           25           30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
           35           40           45
Lys Leu Leu Ile Tyr Leu Gly Ser Asn Leu Asp Ala Gly Val Pro Asp
           50           55           60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65           70           75           80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
           85           90           95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
           100           105           110

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<210> 71

<211> 110
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 71
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Glu Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 72
 <211> 110
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 72
 Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 73
 <211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 73

Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5				10						15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Ser	Ser	Ser
			20					25						30	
Gly	Tyr	Asn	Tyr	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
		35					40					45			
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
		50				55					60				
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65					70					75					80
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	Glu	Ser	Arg
				85					90						95
Glu	Leu	Pro	Ser	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
			100					105					110		

<210> 74

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 74

Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5				10						15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Ser	Ser	Ser
			20					25						30	
Gly	Tyr	Asn	Tyr	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro
		35					40					45			
Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp
		50				55					60				
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser
65					70					75					80
Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg
				85					90						95
Glu	Leu	Pro	Gly	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys		
			100					105					110		

<210> 75

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 75

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Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1           5           10           15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
           20           25           30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
           35           40           45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
           50           55           60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65           70           75           80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Trp
           85           90           95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
           100          105          110

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<210> 76

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 76

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Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1           5           10           15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
           20           25           30
Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
           35           40           45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
           50           55           60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65           70           75           80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gly Val Arg
           85           90           95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
           100          105          110

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<210> 77

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 77

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Leu
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 78

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 78

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Ile
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 79

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 79

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Glu Ser Arg
 85 90 95
 Asp Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 80

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 80

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Ser
 20 25 30
 Gly Tyr Asn Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Asp Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 81

<211> 118

<212> PRT

<213> 人工合成(Artificial)

<400> 81

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Arg
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 82
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 82
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser His Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 83
 <211> 118
 <212> PRT

<210> 85
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 85
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Ile Asn Ser Asp Gly Ser Asn Thr Tyr Glu Pro Gly Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 86
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 86
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Gly Ser Thr Trp Tyr Pro Asp Pro Thr
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr

	100	105	110
Leu Val Thr Val Ser Ser			
	115		
<210>	87		
<211>	118		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	87		
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly			
1	5	10	15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe			
	20	25	30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val			
	35	40	45
Ala Thr Leu Asn Ala Gly Gly Glu Ser Thr Tyr Tyr Pro Asp Pro Met			
	50	55	60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr			
65	70	75	80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys			
	85	90	95
Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr			
	100	105	110
Leu Val Thr Val Ser Ser			
	115		
<210>	88		
<211>	118		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	88		
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly			
1	5	10	15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe			
	20	25	30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val			
	35	40	45
Ala Thr Ile Asn Ser Ser Gly Glu Asn Ser Tyr Ala Pro Asp Thr Met			
	50	55	60
Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr			
65	70	75	80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
 115

<210> 89

<211> 118

<212> PRT

<213> 人工合成(Artificial)

<400> 89

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30

Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45

Ala Thr Leu Asn Ser Asp Gly Gly Asn Thr Tyr Tyr Pro Arg Tyr Met
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
 115

<210> 90

<211> 118

<212> PRT

<213> 人工合成(Artificial)

<400> 90

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30

Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45

Ala Thr Leu Asn Ser Asp Gly Ser Ala Thr Tyr Tyr Pro Gln Arg Met

50						55						60						
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Ser	Leu	Tyr			
65						70						75			80			
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys			
						85						90			95			
Ala	Arg	Asp	Pro	Asn	Trp	Asp	Tyr	Phe	Asp	Phe	Trp	Gly	Gln	Gly	Thr			
						100						105			110			
Leu	Val	Thr	Val	Ser	Ser													
						115												
<210>	91																	
<211>	118																	
<212>	PRT																	
<213>	人工合成 (Artificial)																	
<400>	91																	
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly			
1				5						10				15				
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Phe			
						20				25				30				
Ser	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Val	Val			
						35				40				45				
Ala	Thr	Leu	Asn	Ser	Asp	Gly	Asp	Asn	Thr	Tyr	Tyr	Pro	Asp	Asp	Met			
						50				55				60				
Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Ser	Leu	Tyr			
65						70						75			80			
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys			
						85						90			95			
Ala	Arg	Asp	Pro	Asn	Trp	Asp	Tyr	Phe	Asp	Phe	Trp	Gly	Gln	Gly	Thr			
						100						105			110			
Leu	Val	Thr	Val	Ser	Ser													
						115												
<210>	92																	
<211>	118																	
<212>	PRT																	
<213>	人工合成 (Artificial)																	
<400>	92																	
Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly			
1				5						10				15				
Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Ser	Ser	Phe			
						20				25				30				

Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Ile Asn Ser Asp Gly Ser Ser Ser Tyr Tyr Pro Ala Arg Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 93
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 93
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro His Trp Met Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 94
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 94
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro His Trp Asp Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 95
 <211> 118
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 95
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asn Tyr Phe Asp Phe Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115
 <210> 96
 <211> 118
 <212> PRT

<213> 人工合成(Artificial)

<400> 96

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe
 20 25 30
 Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Val Val
 35 40 45
 Ala Thr Leu Asn Ser Asp Gly Asp Asn Thr Tyr Tyr Pro Asp Asn Met
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Asp Pro Asn Trp Asn Tyr Phe Asp Ile Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Thr Val Ser Ser
 115

<210> 97

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 97

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Glu Ala Ser Gln Asp Ile Asp Ser Tyr
 20 25 30
 Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 98

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 98

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	His	Asp	Ile	Leu	Gly	Tyr
			20					25					30		
Leu	Ala	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile
		35					40					45			
Tyr	Arg	Ala	Asn	Arg	Leu	Val	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75				80	
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100						105						

<210> 99

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 99

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Gly	Arg	Asp	Ile	Ala	Ser	Tyr
			20					25					30		
Leu	Thr	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile
		35					40					45			
Tyr	Arg	Ala	Asn	Arg	Leu	Val	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
		50				55					60				
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75				80	
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg
				85					90					95	
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100						105						

<210> 100

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 100

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Gly Gln Asp Ile Leu Ser Tyr
 20 25 30

Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45

Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 101

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 101

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Gly Ala Ser Gln Asp Ile Ser Ser Tyr
 20 25 30

Thr Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45

Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 102

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 102

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Arg	Asp	Ile	Asp	Ser	Tyr
			20					25						30	
Ala	Thr	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile
			35				40							45	
Tyr	Arg	Ala	Asn	Arg	Leu	Val	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
			50				55					60			
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg
				85					90						95
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100						105						

<210> 103

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 103

Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly
1				5				10						15	
Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Ile	Asn	Ser	Tyr
			20					25						30	
Leu	Thr	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile
			35				40							45	
Tyr	Glu	Ala	Gly	Ser	Leu	Val	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
			50				55					60			
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65					70					75					80
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg
				85					90						95
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
			100						105						

<210> 104

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 104

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Lys Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 105

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 105

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Glu Ser Asn Glu Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 106

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 106

Asn Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Tyr Leu Gln Gly Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 107

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 107

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Gly Ala Asn Val Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 108

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 108

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ser Asn Asn Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 109

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 109

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Ser Ala Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 110

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 110

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr

	20		25		30														
Leu	Thr	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile				
	35						40					45							
Tyr	Arg	Ala	Asn	Asp	Leu	Leu	Lys	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly				
	50						55					60							
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro				
65					70					75					80				
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg				
				85					90						95				
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys									
			100					105											
<210>	111																		
<211>	107																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	111																		
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly				
1				5						10				15					
Asp	Arg	Val	Thr	Ile	Thr	Cys	Ala	Ser	Ser	Arg	Asp	Ile	Asn	Ser	Tyr				
			20							25				30					
Ser	Ala	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Thr	Leu	Ile				
							40							45					
Tyr	Arg	Ala	Asn	Arg	Leu	Val	Asp	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly				
							55					60							
Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro				
65					70					75					80				
Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Leu	Gln	Tyr	Asp	Glu	Phe	Pro	Arg				
				85					90						95				
Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys									
			100					105											
<210>	112																		
<211>	107																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	112																		
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val	Gly				
1				5						10				15					
Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ser	Ser	Lys	Asp	Ile	Glu	Ser	Tyr				
			20							25				30					

Leu Ser Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ala Asn Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 113

<211> 107

<212> PRT

<213> 人工合成(Artificial)

<400> 113

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Ile Asn Ser Tyr
 20 25 30
 Leu Thr Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Thr Leu Ile
 35 40 45
 Tyr Arg Ser Lys Arg Leu Val Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
 65 70 75 80
 Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Glu Phe Pro Arg
 85 90 95
 Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 114

<211> 374

<212> PRT

<213> 人工合成(Artificial)

<400> 114

Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Gln Leu Leu Phe Asn Lys Thr Lys Ser Val Glu Phe Thr
 20 25 30
 Phe Cys Asn Asp Thr Val Val Ile Pro Cys Phe Val Thr Asn Met Glu

35	40	45
Ala Gln Asn Thr Thr Glu Val Tyr Val Lys Trp Lys Phe Lys Gly Arg		
50	55	60
Asp Ile Tyr Thr Phe Asp Gly Ala Leu Asn Lys Ser Thr Val Pro Thr		
65	70	75
Asp Phe Ser Ser Ala Lys Ile Glu Val Ser Gln Leu Leu Lys Gly Asp		
85	90	95
Ala Ser Leu Lys Met Asp Lys Ser Asp Ala Val Ser His Thr Gly Asn		
100	105	110
Tyr Thr Cys Glu Val Thr Glu Leu Thr Arg Glu Gly Glu Thr Ile Ile		
115	120	125
Glu Leu Lys Tyr Arg Val Val Ser Trp Phe Ser Pro Asn Glu Glu Pro		
130	135	140
Lys Ser Ser Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu		
145	150	155
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp		
165	170	175
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp		
180	185	190
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly		
195	200	205
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn		
210	215	220
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp		
225	230	235
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro		
245	250	255
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu		
260	265	270
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn		
275	280	285
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile		
290	295	300
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr		
305	310	315
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys		
325	330	335
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys		
340	345	350

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 355 360 365
 Ser Leu Ser Pro Gly Lys
 370
 <210> 115
 <211> 370
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 115
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Glu Pro Lys Ser Ser Asp
 130 135 140
 Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
 145 150 155 160
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 165 170 175
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 180 185 190
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 195 200 205
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 210 215 220
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 225 230 235 240

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 245 250 255
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 260 265 270
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 275 280 285
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 290 295 300
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 305 310 315 320
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 325 330 335
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 340 345 350
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 355 360 365
 Gly Lys
 370
 <210> 116
 <211> 152
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 116
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125

Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Asp Tyr Lys Asp Asp Asp
 130 135 140
 Asp Lys His His His His His His
 145 150
 <210> 117
 <211> 592
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 117
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Leu Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly
 130 135 140
 Pro Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu
 145 150 155 160
 Ser His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn
 165 170 175
 Gly Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu
 180 185 190
 Ser Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg
 195 200 205
 Glu Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu
 210 215 220
 Gln Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg
 225 230 235 240

Val Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn
 245 250 255
 Gln Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu
 260 265 270
 Gln Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala
 275 280 285
 Ser Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp
 290 295 300
 Leu Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys
 305 310 315 320
 Gln Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu
 325 330 335
 Lys Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu
 340 345 350
 Asn Thr Gly Ser Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro
 355 360 365
 Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser
 370 375 380
 Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu
 385 390 395 400
 Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
 405 410 415
 Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
 420 425 430
 Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val
 435 440 445
 Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
 450 455 460
 Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr
 465 470 475 480
 Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu
 485 490 495
 Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys
 500 505 510
 Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn
 515 520 525
 Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp
 530 535 540
 Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys

545 550 555 560
 Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly
 565 570 575
 Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
 580 585 590
 <210> 118
 <211> 376
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 118
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Leu Val Ala Ala Gly Glu Thr Ala Thr Leu Arg Cys Thr Ala Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Asp Leu Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Gly Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Asp Val Glu Phe Lys Ser Gly Ala Gly
 115 120 125
 Thr Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly
 130 135 140
 Pro Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu
 145 150 155 160
 Ser His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn
 165 170 175
 Gly Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu
 180 185 190
 Ser Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg
 195 200 205
 Glu Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu
 210 215 220
 Gln Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg

225	230	235	240
Val Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn			
	245	250	255
Gln Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu			
	260	265	270
Gln Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala			
	275	280	285
Ser Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp			
	290	295	300
Leu Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys			
305	310	315	320
Gln Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu			
	325	330	335
Lys Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu			
	340	345	350
Asn Thr Gly Ser Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp			
	355	360	365
Asp Lys His His His His His His			
	370	375	
<210> 119			
<211> 591			
<212> PRT			
<213> 人工合成(Artificial)			
<400> 119			
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
1	5	10	15
Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val			
	20	25	30
Ser Val Ala Ala Gly Glu Ser Ala Ile Leu His Cys Thr Val Thr Ser			
	35	40	45
Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Ala			
	50	55	60
Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr			
65	70	75	80
Thr Val Ser Glu Ser Thr Lys Arg Glu Asn Met Asp Phe Ser Ile Ser			
	85	90	95
Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
	100	105	110
Phe Arg Lys Gly Ser Pro Asp Thr Glu Phe Lys Ser Gly Ala Gly Thr			

115	120	125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro		
130	135	140
Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser		
145	150	155
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly		
165	170	175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu Ser		
180	185	190
Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg Glu		
195	200	205
Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln		
210	215	220
Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg Val		
225	230	235
Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln		
245	250	255
Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln		
260	265	270
Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser		
275	280	285
Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu		
290	295	300
Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln		
305	310	315
Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys		
325	330	335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn		
340	345	350
Thr Gly Ser Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys		
355	360	365
Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val		
370	375	380
Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser		
385	390	395
Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp		
405	410	415
Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln		
420	425	430

Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
 435 440 445
 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 450 455 460
 Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile
 465 470 475 480
 Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 485 490 495
 Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met
 500 505 510
 Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn
 515 520 525
 Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser
 530 535 540
 Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn
 545 550 555 560
 Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu
 565 570 575
 His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
 580 585 590
 <210> 120
 <211> 375
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 120
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Asp Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Glu Ser Ala Ile Leu His Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Ala
 50 55 60
 Arg Glu Leu Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Thr Val Ser Glu Ser Thr Lys Arg Glu Asn Met Asp Phe Ser Ile Ser
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110

Phe Arg Lys Gly Ser Pro Asp Thr Glu Phe Lys Ser Gly Ala Gly Thr		
115	120	125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro		
130	135	140
Ala Ala Arg Ala Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser		
145	150	155
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly		
165	170	175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu Ser		
180	185	190
Val Ser Tyr Ser Ile His Ser Thr Ala Lys Val Val Leu Thr Arg Glu		
195	200	205
Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln		
210	215	220
Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Thr Ile Arg Val		
225	230	235
Pro Pro Thr Leu Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln		
245	250	255
Val Asn Val Thr Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln		
260	265	270
Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser		
275	280	285
Thr Val Thr Glu Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu		
290	295	300
Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln		
305	310	315
Val Glu His Asp Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys		
325	330	335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn		
340	345	350
Thr Gly Ser Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp Asp		
355	360	365
Lys His His His His His His		
370	375	
<210>	121	
<211>	591	
<212>	PRT	
<213>	人工合成 (Artificial)	
<400>	121	

Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Ser Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Leu Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Ala Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Val Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Leu Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln

305	310	315	320
Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys			
	325	330	335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
	340	345	350
Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys			
	355	360	365
Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val			
	370	375	380
Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser			
385	390	395	400
Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp			
	405	410	415
Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln			
	420	425	430
Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser			
	435	440	445
Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys			
	450	455	460
Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile			
465	470	475	480
Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro			
	485	490	495
Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met			
	500	505	510
Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn			
	515	520	525
Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser			
	530	535	540
Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn			
545	550	555	560
Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu			
	565	570	575
His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys			
	580	585	590
<210>	122		
<211>	375		
<212>	PRT		
<213>	人工合成(Artificial)		

<400> 122
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Ser Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr Asn Leu Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Ala Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Val Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Leu Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300

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Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
305                 310                 315                 320
Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
                 325                 330                 335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
                 340                 345                 350
Thr Gly Thr Asn Glu Arg Gly Ser Ser Asp Tyr Lys Asp Asp Asp Asp
                 355                 360                 365
Lys His His His His His His
                 370                 375
<210> 123
<211> 591
<212> PRT
<213> 人工合成(Artificial)
<400> 123
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
1          5          10         15
Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
          20          25          30
Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser
          35          40          45
Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly
          50          55          60
Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr
65          70          75          80
Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg
          85          90          95
Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
          100         105         110
Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr
          115         120         125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
          130         135         140
Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
145          150         155         160
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
          165         170         175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
          180         185         190

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Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Phe Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Met Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270
 Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys
 355 360 365
 Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val
 370 375 380
 Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
 385 390 395 400
 Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
 405 410 415
 Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
 420 425 430
 Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
 435 440 445
 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 450 455 460
 Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile
 465 470 475 480
 Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 485 490 495
 Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met

	500		505		510														
Val	Thr	Asp	Phe	Met	Pro	Glu	Asp	Ile	Tyr	Val	Glu	Trp	Thr	Asn	Asn				
	515		520		525														
Gly	Lys	Thr	Glu	Leu	Asn	Tyr	Lys	Asn	Thr	Glu	Pro	Val	Leu	Asp	Ser				
	530		535		540														
Asp	Gly	Ser	Tyr	Phe	Met	Tyr	Ser	Lys	Leu	Arg	Val	Glu	Lys	Lys	Asn				
545			550		555										560				
Trp	Val	Glu	Arg	Asn	Ser	Tyr	Ser	Cys	Ser	Val	Val	His	Glu	Gly	Leu				
			565		570										575				
His	Asn	His	His	Thr	Thr	Lys	Ser	Phe	Ser	Arg	Thr	Pro	Gly	Lys					
			580		585										590				
<210>	124																		
<211>	375																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	124																		
Met	Glu	Phe	Gly	Leu	Ser	Trp	Leu	Phe	Leu	Val	Ala	Ile	Leu	Lys	Gly				
1			5						10					15					
Val	Gln	Cys	Glu	Glu	Glu	Leu	Gln	Val	Ile	Gln	Pro	Glu	Lys	Ser	Val				
			20						25					30					
Ser	Val	Ala	Ala	Gly	Glu	Ser	Ala	Thr	Leu	Asn	Cys	Thr	Ala	Thr	Ser				
			35						40					45					
Leu	Ile	Pro	Val	Gly	Pro	Ile	Gln	Trp	Phe	Arg	Gly	Val	Gly	Pro	Gly				
			50						55					60					
Arg	Glu	Leu	Ile	Tyr	His	Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr				
65									70					75					80
Pro	Val	Ser	Asp	Pro	Thr	Lys	Arg	Asn	Asn	Met	Asp	Phe	Ser	Ile	Arg				
									85					90					95
Ile	Ser	Asn	Ile	Thr	Pro	Ala	Asp	Ala	Gly	Thr	Tyr	Tyr	Cys	Val	Lys				
			100						105					110					
Phe	Arg	Lys	Gly	Ser	Pro	Asp	Val	Glu	Leu	Lys	Ser	Gly	Ala	Gly	Thr				
			115						120					125					
Glu	Leu	Ser	Val	Arg	Ala	Lys	Pro	Ser	Ala	Pro	Val	Val	Ser	Gly	Pro				
			130						135					140					
Ala	Val	Arg	Ala	Thr	Ala	Glu	His	Thr	Val	Ser	Phe	Thr	Cys	Glu	Ser				
145									150					155					160
His	Gly	Phe	Ser	Pro	Arg	Asp	Ile	Thr	Leu	Lys	Trp	Phe	Lys	Asn	Gly				
									165					170					175
Asn	Glu	Leu	Ser	Asp	Phe	Gln	Thr	Asn	Val	Asp	Pro	Ala	Gly	Lys	Ser				

	180		185		190														
Val	Ser	Tyr	Ser	Ile	Arg	Ser	Thr	Ala	Arg	Val	Val	Leu	Thr	Arg	Arg				
	195							200				205							
Asp	Val	His	Ser	Gln	Val	Ile	Cys	Glu	Val	Ala	His	Val	Thr	Leu	Gln				
	210							215				220							
Gly	Asp	Pro	Leu	Arg	Gly	Thr	Ala	Asn	Leu	Ser	Glu	Ala	Ile	Arg	Val				
225					230					235					240				
Pro	Pro	Phe	Leu	Glu	Phe	Thr	Gln	Gln	Ser	Met	Arg	Ala	Asp	Asn	Gln				
			245						250					255					
Val	Asn	Val	Thr	Cys	Gln	Val	Met	Lys	Phe	Tyr	Pro	Gln	Arg	Leu	Gln				
			260						265					270					
Leu	Thr	Trp	Leu	Glu	Asn	Gly	Asn	Val	Ser	Arg	Thr	Glu	Met	Ala	Ser				
			275					280						285					
Ala	Leu	Pro	Glu	Asn	Lys	Asp	Gly	Thr	Tyr	Asn	Trp	Thr	Ser	Trp	Leu				
			290					295						300					
Leu	Val	Asn	Val	Ser	Ala	His	Arg	Asp	Asp	Val	Lys	Leu	Thr	Cys	Gln				
305					310									315					320
Val	Glu	His	Asp	Gly	Gln	Pro	Ala	Val	Asn	Lys	Ser	Phe	Ser	Val	Lys				
				325										330					335
Val	Ser	Ala	His	Pro	Lys	Glu	Gln	Gly	Ser	Asn	Thr	Ala	Ala	Glu	Asn				
				340										345					350
Thr	Gly	Thr	Asn	Glu	Arg	Gly	Ser	Ser	Asp	Tyr	Lys	Asp	Asp	Asp	Asp				
				355										360					365
Lys	His	His	His	His	His	His													
	370																		375
<210>	125																		
<211>	372																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	125																		
Met	Glu	Phe	Gly	Leu	Ser	Trp	Leu	Phe	Leu	Val	Ala	Ile	Leu	Lys	Gly				
1				5						10				15					
Val	Gln	Cys	Glu	Glu	Glu	Leu	Gln	Val	Ile	Gln	Pro	Glu	Lys	Ser	Val				
			20							25				30					
Ser	Val	Ala	Ala	Gly	Asp	Ser	Ala	Thr	Leu	Asn	Cys	Thr	Val	Thr	Ser				
			35						40					45					
Leu	Ile	Pro	Val	Gly	Pro	Ile	Gln	Trp	Phe	Arg	Gly	Ala	Gly	Pro	Gly				
	50						55						60						
Arg	Glu	Leu	Ile	Tyr	His	Gln	Lys	Glu	Gly	His	Phe	Pro	Arg	Val	Thr				

<210> 126
 <211> 591
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 126
 Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly
 1 5 10 15
 Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val
 20 25 30
 Ser Val Ala Ala Gly Asp Ser Ala Thr Leu Asn Cys Thr Val Thr Ser
 35 40 45
 Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly
 50 55 60
 Arg Glu Leu Ile Tyr His Gln Lys Glu Gly His Phe Pro Arg Val Thr
 65 70 75 80
 Ser Val Ser Glu Ser Thr Lys Arg Asn Asn Met Asp Phe Ser Ile His
 85 90 95
 Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys
 100 105 110
 Phe Arg Lys Gly Ser Pro Asp Val Glu Val Lys Ser Gly Ala Gly Thr
 115 120 125
 Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro
 130 135 140
 Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser
 145 150 155 160
 His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly
 165 170 175
 Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser
 180 185 190
 Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg
 195 200 205
 Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln
 210 215 220
 Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val
 225 230 235 240
 Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln
 245 250 255
 Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln
 260 265 270

Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser
 275 280 285
 Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu
 290 295 300
 Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln
 305 310 315 320
 Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys
 325 330 335
 Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn
 340 345 350
 Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys
 355 360 365
 Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val
 370 375 380
 Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser
 385 390 395 400
 Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp
 405 410 415
 Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln
 420 425 430
 Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser
 435 440 445
 Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys
 450 455 460
 Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile
 465 470 475 480
 Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 485 490 495
 Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met
 500 505 510
 Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn
 515 520 525
 Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser
 530 535 540
 Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn
 545 550 555 560
 Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu
 565 570 575
 His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys

	580	585	590
<210>	127		
<211>	372		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	127		
Met Glu Phe Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly			
1	5	10	15
Val Gln Cys Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val			
	20	25	30
Ser Val Ala Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser			
	35	40	45
Leu Ile Pro Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly			
	50	55	60
Arg Glu Leu Ile Tyr Ser Gln Lys Glu Gly His Phe Pro Arg Val Thr			
65	70	75	80
Pro Val Ser Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg			
	85	90	95
Ile Ser Asn Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys			
	100	105	110
Phe Arg Lys Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr			
	115	120	125
Glu Leu Ser Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro			
	130	135	140
Ala Val Arg Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser			
145	150	155	160
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
	165	170	175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser			
	180	185	190
Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg			
	195	200	205
Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
	210	215	220
Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val			
225	230	235	240
Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln			
	245	250	255
Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln			

260	265	270
Leu Thr Trp	Leu Glu Asn Gly Asn Val Ser Arg Thr	Glu Met Ala Ser
275	280	285
Ala Leu Pro	Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr	Ser Trp Leu
290	295	300
Leu Val Asn	Val Ser Ala His Arg Asp Asp Val Lys Leu Thr	Cys Gln
305	310	315
Val Glu His	Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser	Val Lys
	325	330
Val Ser Ala	His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala	Glu Asn
	340	345
Thr Gly Thr	Asn Glu Arg Asp Tyr Lys Asp Asp Asp	Lys His His
	355	360
His His His	His	
370		
<210>	128	
<211>	591	
<212>	PRT	
<213>	人工合成(Artificial)	
<400>	128	
Met Glu Phe	Gly Leu Ser Trp Leu Phe Leu Val Ala Ile Leu Lys Gly	
1	5	10
Val Gln Cys	Glu Glu Glu Leu Gln Val Ile Gln Pro Glu Lys Ser Val	
	20	25
Ser Val Ala	Ala Gly Glu Ser Ala Thr Leu Asn Cys Thr Ala Thr Ser	
	35	40
Leu Ile Pro	Val Gly Pro Ile Gln Trp Phe Arg Gly Val Gly Pro Gly	
	50	55
Arg Glu Leu	Ile Tyr Ser Gln Lys Glu Gly His Phe Pro Arg Val Thr	
65	70	75
Pro Val Ser	Asp Pro Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg	
	85	90
Ile Ser Asn	Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys	
	100	105
Phe Arg Lys	Gly Ser Pro Asp Val Glu Leu Lys Ser Gly Ala Gly Thr	
	115	120
Glu Leu Ser	Val Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro	
	130	135
Ala Val Arg	Ala Thr Ala Glu His Thr Val Ser Phe Thr Cys Glu Ser	

145	150	155	160
His Gly Phe Ser Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly			
	165	170	175
Asn Glu Leu Ser Asp Phe Gln Thr Asn Val Asp Pro Ala Gly Lys Ser			
	180	185	190
Val Ser Tyr Ser Ile Arg Ser Thr Ala Arg Val Val Leu Thr Arg Arg			
	195	200	205
Asp Val His Ser Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln			
	210	215	220
Gly Asp Pro Leu Arg Gly Thr Ala Asn Leu Ser Glu Ala Ile Arg Val			
225	230	235	240
Pro Pro Phe Leu Glu Val Thr Gln Gln Ser Met Arg Ala Asp Asn Gln			
	245	250	255
Val Asn Val Thr Cys Gln Val Thr Lys Phe Tyr Pro Gln Arg Leu Gln			
	260	265	270
Leu Thr Trp Leu Glu Asn Gly Asn Val Ser Arg Thr Glu Met Ala Ser			
	275	280	285
Ala Leu Pro Glu Asn Lys Asp Gly Thr Tyr Asn Trp Thr Ser Trp Leu			
	290	295	300
Leu Val Asn Val Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln			
305	310	315	320
Val Glu His Asp Gly Gln Pro Ala Val Asn Lys Ser Phe Ser Val Lys			
	325	330	335
Val Ser Ala His Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn			
	340	345	350
Thr Gly Thr Asn Glu Arg Glu Pro Arg Gly Pro Thr Ile Lys Pro Cys			
	355	360	365
Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly Gly Pro Ser Val			
	370	375	380
Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met Ile Ser Leu Ser			
385	390	395	400
Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro Asp			
	405	410	415
Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala Gln			
	420	425	430
Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu Arg Val Val Ser			
	435	440	445
Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe Lys			
	450	455	460

Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile Glu Arg Thr Ile
 465 470 475 480
 Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val Tyr Val Leu Pro
 485 490 495
 Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr Leu Thr Cys Met
 500 505 510
 Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu Trp Thr Asn Asn
 515 520 525
 Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro Val Leu Asp Ser
 530 535 540
 Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val Glu Lys Lys Asn
 545 550 555 560
 Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val His Glu Gly Leu
 565 570 575
 His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr Pro Gly Lys
 580 585 590
 <210> 129
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 129
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140

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

<210> 130
 <211> 446
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 130
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 131
 <211> 449
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 <213> 人工合成(Artificial)
 <400> 131
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys

	405		410		415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu					
	420		425		430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly					
	435		440		445
Lys					
<210>	132				
<211>	446				
<212>	PRT				
<213>	人工合成(Artificial)				
<400>	132				
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala					
1	5		10		15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr					
	20		25		30
Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile					
	35		40		45
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe					
	50		55		60
Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr					
65	70		75		80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys					
	85		90		95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly					
	100		105		110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe					
	115		120		125
Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu					
	130		135		140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp					
145	150		155		160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu					
	165		170		175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser					
	180		185		190
Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro					
	195		200		205
Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro					
	210		215		220

Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 260 265 270
 Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 275 280 285
 Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val
 290 295 300
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 305 310 315 320
 Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 325 330 335
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 340 345 350
 Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 133
 <211> 445
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 133
 Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45

Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285
 Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys

	355		360		365														
	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln			
	370							375				380							
	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Met	Leu	Asp	Ser	Asp	Gly			
	385					390					395				400				
	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln			
				405						410				415					
	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn			
			420						425					430					
	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys						
		435						440					445						
<210>	134																		
<211>	449																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	134																		
	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala			
1				5						10				15					
	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Thr	Asn	Tyr			
			20						25					30					
	Trp	Ile	Asn	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile			
		35						40					45						
	Ala	Met	Ile	Asp	Pro	Ser	Asp	Ser	Glu	Thr	His	Tyr	Asn	Gln	Ile	Phe			
		50					55					60							
	Lys	Asp	Arg	Ala	Thr	Leu	Thr	Thr	Asp	Thr	Ser	Thr	Ser	Thr	Ala	Tyr			
65						70					75				80				
	Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys			
				85						90				95					
	Ala	Met	Asp	Tyr	Gly	Ser	Leu	Tyr	Ala	Met	Asp	Tyr	Trp	Gly	Arg	Gly			
			100						105					110					
	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe			
			115						120					125					
	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu			
		130					135						140						
	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp			
145						150					155				160				
	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu			
				165						170				175					
	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser			

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

Lys

<210> 135

<211> 449

<212> PRT

<213> 人工合成(Artificial)

<400> 135

305	310	315	320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys			
	325	330	335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
	340	345	350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
	355	360	365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
	370	375	380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
385	390	395	400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
	405	410	415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
	420	425	430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
	435	440	445
Lys			
<210>	136		
<211>	449		
<212>	PRT		
<213>	人工合成 (Artificial)		
<400>	136		
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala			
1	5	10	15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
	20	25	30
Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile			
	35	40	45
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
	50	55	60
Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr			
65	70	75	80
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys			
	85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
	100	105	110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe			
	115	120	125

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly

435	440	445
Lys		
<210> 137		
<211> 449		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 137		
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala		
1 5 10 15		
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr		
20 25 30		
Trp Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile		
35 40 45		
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe		
50 55 60		
Lys Asp Arg Ala Thr Leu Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr		
65 70 75 80		
Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys		
85 90 95		
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly		
100 105 110		
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
115 120 125		
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu		
130 135 140		
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
145 150 155 160		
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
165 170 175		
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
180 185 190		
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro		
195 200 205		
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
210 215 220		
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Ala Gly Pro		
225 230 235 240		
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
245 250 255		

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445

Lys

<210> 138

<211> 443

<212> PRT

<213> 人工合成(Artificial)

<400> 138

Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr

65	70	75	80
Leu His Leu Ser Ser	Leu Thr Ser Glu Asp Thr	Ala Val Tyr Tyr Cys	
	85	90	95
Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser			
	100	105	110
Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser			
	115	120	125
Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp			
	130	135	140
Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr			
	145	150	155
Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr			
	165	170	175
Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln			
	180	185	190
Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp			
	195	200	205
Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro			
	210	215	220
Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro			
	225	230	235
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr			
	245	250	255
Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn			
	260	265	270
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg			
	275	280	285
Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val			
	290	295	300
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser			
	305	310	315
Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys			
	325	330	335
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp			
	340	345	350
Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe			
	355	360	365
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu			
	370	375	380

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 385 390 395 400
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 405 410 415
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 420 425 430
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440
 <210> 139
 <211> 440
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 139
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 115 120 125
 Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
 180 185 190
 Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205

Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
 210 215 220
 Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 225 230 235 240
 Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 245 250 255
 Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
 260 265 270
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 275 280 285
 Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 290 295 300
 Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
 305 310 315 320
 Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 325 330 335
 Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
 340 345 350
 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 355 360 365
 Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
 370 375 380
 Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 385 390 395 400
 Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
 405 410 415
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430
 Ser Leu Ser Leu Ser Leu Gly Lys
 435 440
 <210> 140
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 140
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30

Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 275 280 285
 Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp

	165	170	175
Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys			
	180	185	190
Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp			
	195	200	205
Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala			
	210	215	220
Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro			
225	230	235	240
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val			
	245	250	255
Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val			
	260	265	270
Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln			
	275	280	285
Phe Gln Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln			
	290	295	300
Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly			
305	310	315	320
Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro			
	325	330	335
Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr			
	340	345	350
Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser			
	355	360	365
Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr			
	370	375	380
Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr			
385	390	395	400
Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe			
	405	410	415
Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys			
	420	425	430
Ser Leu Ser Leu Ser Leu Gly Lys			
	435	440	
<210>	142		
<211>	439		
<212>	PRT		
<213>	人工合成 (Artificial)		

<400> 142
Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15
Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
20 25 30
Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
35 40 45
Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
50 55 60
Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
65 70 75 80
Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110
Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
115 120 125
Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
130 135 140
Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
145 150 155 160
Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
165 170 175
Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln
180 185 190
Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
195 200 205
Lys Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala
210 215 220
Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
225 230 235 240
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
245 250 255
Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
260 265 270
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
275 280 285
Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp
290 295 300

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
 305 310 315 320
 Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg
 325 330 335
 Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 340 345 350
 Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 355 360 365
 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 370 375 380
 Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 385 390 395 400
 Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 405 410 415
 Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 420 425 430
 Leu Ser Leu Ser Pro Gly Lys
 435
 <210> 143
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 143
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125

Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 275 280 285
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 340 345 350
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 355 360 365
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 370 375 380
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 385 390 395 400
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 405 410 415
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 420 425 430
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys

				85					90					95			
Ala	Arg	Trp	Gly	Ala	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser		
				100					105					110			
Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser		
				115					120					125			
Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp		
				130					135					140			
Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr		
				145					150					155			160
Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr		
				165					170					175			
Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln		
				180					185					190			
Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp		
				195					200					205			
Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro		
				210					215					220			
Cys	Pro	Ala	Pro	Glu	Ala	Ala	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro		
				225					230					235			240
Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr		
				245					250					255			
Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn		
				260					265					270			
Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg		
				275					280					285			
Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val		
				290					295					300			
Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser		
				305					310					315			320
Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Ala	Ala	Lys		
				325					330					335			
Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp		
				340					345					350			
Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe		
				355					360					365			
Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu		
				370					375					380			
Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe		
				385					390					395			400

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 405 410 415
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 420 425 430
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440
 <210> 146
 <211> 443
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 146
 Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr
 20 25 30
 Tyr Ile His Trp Val Gln Gln Arg Thr Glu Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220

Gly Arg Ile Asp Pro Glu Asp Gly Glu Thr Lys Tyr Ala Pro Lys Phe
 50 55 60
 Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu His Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Trp Gly Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
 100 105 110
 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 115 120 125
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 165 170 175
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 180 185 190
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 195 200 205
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 210 215 220
 Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro
 225 230 235 240
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 245 250 255
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 260 265 270
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 275 280 285
 Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 290 295 300
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 305 310 315 320
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 325 330 335
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 340 345 350
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe

355	360	365
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu		
370	375	380
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe		
385	390	395
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly		
405	410	415
Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr		
420	425	430
Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys		
435	440	
<210> 148		
<211> 449		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 148		
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
1	5	10
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		
20	25	30
Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		
35	40	45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
50	55	60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		
65	70	75
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		
85	90	95
Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
100	105	110
Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
115	120	125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu		
130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
145	150	155
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
165	170	175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		

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

Lys

<210> 149

<211> 446

<212> PRT

<213> 人工合成(Artificial)

<400> 149

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala
1			5					10						15	
Ser	Val	Arg	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Phe	Thr	Phe	Thr	Asn	Tyr
		20						25						30	
Tyr	Ile	His	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile
		35					40						45		
Gly	Trp	Ile	Tyr	Pro	Gly	Asn	Val	Asn	Thr	Lys	Tyr	Asn	Glu	Lys	Phe
		50				55						60			
Lys	Ala	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Thr	Thr	Ala	Tyr
65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Ala	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
					85					90					95
Ala	Arg	Pro	Thr	Ile	Ile	Ala	Thr	Asp	Phe	Asp	Val	Trp	Gly	Ala	Gly
			100						105					110	
Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
			115						120					125	
Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	Thr	Ala	Ala	Leu
			130						135					140	
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145						150					155				160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
					165						170				175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180											190	
Ser	Ser	Leu	Gly	Thr	Lys	Thr	Tyr	Thr	Cys	Asn	Val	Asp	His	Lys	Pro
		195							200					205	
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Ser	Lys	Tyr	Gly	Pro	Pro
		210										220			
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Leu	Gly	Gly	Pro	Ser	Val	Phe
225						230						235			240
Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro
				245							250				255
Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val
			260								265				270
Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr
			275									285			
Lys	Pro	Arg	Glu	Glu	Gln	Phe	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val
			290												300
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys

305		310		315		320
Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser						
		325		330		335
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro						
		340		345		350
Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val						
		355		360		365
Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly						
		370		375		380
Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp						
385		390		395		400
Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp						
		405		410		415
Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His						
		420		425		430
Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys						
		435		440		445
<210>	150					
<211>	449					
<212>	PRT					
<213>	人工合成(Artificial)					
<400>	150					
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala						
1		5		10		15
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr						
		20		25		30
Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile						
		35		40		45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe						
		50		55		60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr						
65		70		75		80
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys						
		85		90		95
Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly						
		100		105		110
Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe						
		115		120		125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu						

130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
145	150	155
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
	165	170
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
	180	185
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro		
	195	200
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
210	215	220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro		
225	230	235
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
	245	250
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
	260	265
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
	275	280
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Gln Ser Thr Tyr Arg Val		
290	295	300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
305	310	315
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys		
	325	330
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
	340	345
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr		
	355	360
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu		
370	375	380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu		
385	390	395
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys		
	405	410
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu		
	420	425
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly		
435	440	445

Lys
 <210> 151
 <211> 446
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 151
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 225 230 235 240
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 245 250 255
 Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val

260	265	270
Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr		
275	280	285
Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val		
290	295	300
Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys		
305	310	315
Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser		
325	330	335
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro		
340	345	350
Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val		
355	360	365
Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly		
370	375	380
Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp		
385	390	395
Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp		
405	410	415
Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His		
420	425	430
Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys		
435	440	445
<210> 152		
<211> 445		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 152		
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
1	5	10
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		
20	25	30
Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		
35	40	45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
50	55	60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		
65	70	75
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		

					85						90						95
Ala	Arg	Pro	Thr	Ile	Ile	Ala	Thr	Asp	Phe	Asp	Val	Trp	Gly	Ala	Gly		
					100						105						110
Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe		
					115						120						125
Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	Thr	Ala	Ala	Leu		
					130						135						140
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp		
					145						150						155
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu		
					165						170						175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser		
					180						185						190
Ser	Asn	Phe	Gly	Thr	Gln	Thr	Tyr	Thr	Cys	Asn	Val	Asp	His	Lys	Pro		
					195						200						205
Ser	Asn	Thr	Lys	Val	Asp	Lys	Thr	Val	Glu	Arg	Lys	Cys	Cys	Val	Glu		
					210						215						220
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Pro	Val	Ala	Gly	Pro	Ser	Val	Phe	Leu		
					225						230						235
Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu		
					245						250						255
Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Gln		
					260						265						270
Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys		
					275						280						285
Pro	Arg	Glu	Glu	Gln	Phe	Asn	Ser	Thr	Phe	Arg	Val	Val	Ser	Val	Leu		
					290						295						300
Thr	Val	Val	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys		
					305						310						315
Val	Ser	Asn	Lys	Gly	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys		
					325						330						335
Thr	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser		
					340						345						350
Arg	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys		
					355						360						365
Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln		
					370						375						380
Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Met	Leu	Asp	Ser	Asp	Gly		
					385						390						395
																	400

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445
 <210> 153
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 153
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220

35	40	45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
50	55	60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		
65	70	75
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		
85	90	95
Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
100	105	110
Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
115	120	125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu		
130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
145	150	155
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
165	170	175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
180	185	190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro		
195	200	205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
210	215	220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro		
225	230	235
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
245	250	255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
260	265	270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
275	280	285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val		
290	295	300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
305	310	315
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys		
325	330	335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
340	345	350

Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys
 <210> 155
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 155
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
 1 5 10 15
 Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr
 20 25 30
 Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe
 50 55 60
 Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys
 85 90 95
 Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly
 100 105 110
 Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu

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

Lys

<210> 156

<211> 449

<212> PRT

<213> 人工合成(Artificial)

<400> 156

Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly	Ala
1				5					10					15	
Ser	Val	Arg	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Phe	Thr	Phe	Thr	Asn	Tyr
			20					25						30	
Tyr	Ile	His	Trp	Val	Lys	Gln	Arg	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Ile
		35					40						45		
Gly	Trp	Ile	Tyr	Pro	Gly	Asn	Val	Asn	Thr	Lys	Tyr	Asn	Glu	Lys	Phe
		50				55						60			
Lys	Ala	Lys	Ala	Thr	Leu	Thr	Ala	Asp	Lys	Ser	Ser	Thr	Thr	Ala	Tyr
65					70					75					80
Met	Gln	Leu	Ser	Ser	Leu	Ala	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Phe	Cys
					85				90						95
Ala	Arg	Pro	Thr	Ile	Ile	Ala	Thr	Asp	Phe	Asp	Val	Trp	Gly	Ala	Gly
			100					105						110	
Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
			115					120						125	
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu
			130				135						140		
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
145					150						155				160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
					165					170					175
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
			180							185				190	
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro
		195						200					205		
Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys
		210						215					220		
Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Ala	Gly	Pro
225						230					235				240
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser
					245						250				255
Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp
			260							265				270	
Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn
			275							280				285	
Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val

290	295	300
Val Ser Val Leu Thr	Val Leu His Gln Asp Trp	Leu Asn Gly Lys Glu
305	310	315
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys		
	325	330
Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		335
	340	345
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr		
	355	360
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu		365
	370	375
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu		
385	390	395
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys		
	405	410
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu		415
	420	425
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly		
	435	440
		445
Lys		
<210> 157		
<211> 449		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 157		
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala		
1	5	10
Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Phe Thr Phe Thr Asn Tyr		
	20	25
Tyr Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile		30
	35	40
		45
Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Lys Tyr Asn Glu Lys Phe		
50	55	60
Lys Ala Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr		
65	70	75
Met Gln Leu Ser Ser Leu Ala Ser Glu Asp Ser Ala Val Tyr Phe Cys		
	85	90
		95
Ala Arg Pro Thr Ile Ile Ala Thr Asp Phe Asp Val Trp Gly Ala Gly		
	100	105
		110

Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu

<210> 159
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 159
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270

Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445

Lys

<210> 160

<211> 446

<212> PRT

<213> 人工合成(Artificial)

<400> 160

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys

				85					90					95	
Ala	Met	Asp	Tyr	Gly	Ser	Leu	Tyr	Ala	Met	Asp	Tyr	Trp	Gly	Arg	Gly
				100					105					110	
Thr	Ser	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe
				115					120					125	
Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser	Glu	Ser	Thr	Ala	Ala	Leu
				130					135					140	
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp
				145					150					155	160
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu
				165					170					175	
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser
				180					185					190	
Ser	Ser	Leu	Gly	Thr	Lys	Thr	Tyr	Thr	Cys	Asn	Val	Asp	His	Lys	Pro
				195					200					205	
Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val	Glu	Ser	Lys	Tyr	Gly	Pro	Pro
				210					215					220	
Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe	Leu	Gly	Gly	Pro	Ser	Val	Phe
				225					230					235	240
Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro
				245					250					255	
Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	Gln	Glu	Asp	Pro	Glu	Val
				260					265					270	
Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr
				275					280					285	
Lys	Pro	Arg	Glu	Glu	Gln	Phe	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val
				290					295					300	
Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys
				305					310					315	320
Lys	Val	Ser	Asn	Lys	Gly	Leu	Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser
				325					330					335	
Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro
				340					345					350	
Ser	Gln	Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val
				355					360					365	
Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly
				370					375					380	
Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp
				385					390					395	400

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 161
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 161
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220

35	40	45
Ala Met Ile Asp Pro Ser Asp	Ser Glu Thr His Tyr Asn Gln Ile Phe	
50	55	60
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr		
65	70	75
Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys		
85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly		
100	105	110
Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe		
115	120	125
Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu		
130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp		
145	150	155
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu		
165	170	175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser		
180	185	190
Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro		
195	200	205
Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro		
210	215	220
Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe		
225	230	235
Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro		
245	250	255
Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val		
260	265	270
Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr		
275	280	285
Lys Pro Arg Glu Glu Gln Phe Gln Ser Thr Tyr Arg Val Val Ser Val		
290	295	300
Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys		
305	310	315
Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser		
325	330	335
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro		
340	345	350

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 355 360 365
 Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
 370 375 380
 Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 385 390 395 400
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 405 410 415
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 420 425 430
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445
 <210> 163
 <211> 445
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 163
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175

Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys Val Glu
 210 215 220
 Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 225 230 235 240
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 245 250 255
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 260 265 270
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 275 280 285
 Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 290 295 300
 Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320
 Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 325 330 335
 Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 385 390 395 400
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 435 440 445
 <210> 164
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 164

305	310	315	320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys			
	325	330	335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
	340	345	350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr			
	355	360	365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			
	370	375	380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu			
385	390	395	400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys			
	405	410	415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu			
	420	425	430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly			
	435	440	445
Lys			
<210> 165			
<211> 449			
<212> PRT			
<213> 人工合成(Artificial)			
<400> 165			
Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala			
1	5	10	15
Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
	20	25	30
Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile			
	35	40	45
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
	50	55	60
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr			
65	70	75	80
Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys			
	85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
	100	105	110
Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe			
	115	120	125

Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
 195 200 205
 Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys
 210 215 220
 Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
 225 230 235 240
 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 245 250 255
 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Gly Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly

	435	440	445
Lys			
<210>	166		
<211>	449		
<212>	PRT		
<213>	人工合成(Artificial)		
<400>	166		
Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala			
1	5	10	15
Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr			
	20	25	30
Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile			
	35	40	45
Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe			
	50	55	60
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr			
65	70	75	80
Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys			
	85	90	95
Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly			
	100	105	110
Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe			
	115	120	125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu			
	130	135	140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp			
145	150	155	160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu			
	165	170	175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser			
	180	185	190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro			
	195	200	205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys			
	210	215	220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro			
225	230	235	240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
	245	250	255

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 260 265 270
 Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 275 280 285
 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
 290 295 300
 Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320
 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
 325 330 335
 Thr Ile Ser Ala Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350
 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445

Lys

<210> 167

<211> 449

<212> PRT

<213> 人工合成(Artificial)

<400> 167

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr

65		70		75		80												
Met	Gln	Leu	Ser	Ser	Leu	Thr	Ser	Gly	Asp	Ser	Ala	Val	Tyr	Tyr	Cys			
				85					90					95				
Ala	Met	Asp	Tyr	Gly	Ser	Leu	Tyr	Ala	Met	Asp	Tyr	Trp	Gly	Arg	Gly			
				100					105					110				
Thr	Ser	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe			
				115					120					125				
Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu			
				130					135					140				
Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp			
145					150					155					160			
Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu			
					165					170					175			
Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser			
					180					185					190			
Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro			
					195					200					205			
Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys			
										210					215			
Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Ala	Gly	Pro			
225										230					235			
Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser			
															245			
Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp			
															250			
Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn			
															260			
Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val			
															265			
Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu			
305															310			
Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys			
															315			
Thr	Ile	Ser	Ala	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr			
															320			
Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr			
															325			
Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu			
															330			
															335			
															340			
															345			
															350			
															355			
															360			
															365			
															370			
															375			
															380			

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 405 410 415
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 435 440 445
 Lys
 <210> 168
 <211> 449
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 168
 Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
 1 5 10 15
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
 35 40 45
 Ala Met Ile Asp Pro Ser Asp Ser Glu Thr His Tyr Asn Gln Ile Phe
 50 55 60
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Met Gln Leu Ser Ser Leu Thr Ser Gly Asp Ser Ala Val Tyr Tyr Cys
 85 90 95
 Ala Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr Trp Gly Arg Gly
 100 105 110
 Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
 115 120 125
 Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
 130 135 140
 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
 145 150 155 160
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
 165 170 175
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
 180 185 190
 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro

195	200	205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys		
210	215	220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro		
225	230	235
240		
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser		
245	250	255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp		
260	265	270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		
275	280	285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Ala Ser Thr Tyr Arg Val		
290	295	300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
305	310	315
320		
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys		
325	330	335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
340	345	350
Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr		
355	360	365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu		
370	375	380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu		
385	390	395
400		
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys		
405	410	415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu		
420	425	430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly		
435	440	445
Lys		
<210> 169		
<211> 111		
<212> PRT		
<213> 人工合成(Artificial)		
<400> 169		
Ala Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly		
1	5	10
		15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
 20 25 30
 Gly Asn Ser Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Val Ser Asn Leu Glu Ser Gly Val Pro Ser
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
 85 90 95
 Glu Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 170

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 170

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Asn Ser Ser
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 171

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 171

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Ser Ser Ser

	20		25		30
Gly Tyr Asp His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro					
	35		40		45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp					
	50		55		60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser					
65		70		75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg					
	85		90		95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys					
	100		105		110

<210> 172

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 172

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly					
1	5		10		15
Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Glu Ser Val Ser Ser Arg					
	20		25		30
Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro					
	35		40		45
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp					
	50		55		60
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser					
65		70		75	80
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg					
	85		90		95
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys					
	100		105		110

<210> 173

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 173

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly					
1	5		10		15
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Ala Ser Val Ser Ser Asn					
	20		25		30

Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 174

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 174

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Arg Ser Ser
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 175

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 175

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Lys Ala Ser Arg Ser Val Arg Ser Asn
 20 25 30
 Gly Tyr Asn His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro

	35		40		45														
	Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Arg	Asp	Ser	Gly	Val	Pro	Asp			
	50						55					60							
	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser			
	65						70					75				80			
	Ser	Phe	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg			
					85					90					95				
	Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
				100					105					110					
<210>	176																		
<211>	110																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	176																		
	Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly			
	1				5					10					15				
	Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Arg	Ser	Asn			
					20				25					30					
	Gly	Tyr	Asn	Trp	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro			
			35					40					45						
	Lys	Leu	Leu	Ile	Tyr	Leu	Ala	Ser	Asn	Leu	Asp	Ser	Gly	Val	Pro	Asp			
	50						55					60							
	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser			
	65						70					75				80			
	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	His	Ser	Arg			
					85					90					95				
	Glu	Leu	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys					
				100					105					110					
<210>	177																		
<211>	110																		
<212>	PRT																		
<213>	人工合成 (Artificial)																		
<400>	177																		
	Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly			
	1				5					10					15				
	Glu	Arg	Ala	Thr	Ile	Asn	Cys	Arg	Ala	Ser	Lys	Ser	Val	Ser	Ser	Asn			
					20				25					30					
	Gly	Tyr	Asn	Trp	Ile	Phe	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro			
			35					40					45						

Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 178

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 178

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Asn
 20 25 30
 Gly Tyr Asn Trp Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp
 50 55 60
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
 65 70 75 80
 Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg
 85 90 95
 Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
 100 105 110

<210> 179

<211> 110

<212> PRT

<213> 人工合成(Artificial)

<400> 179

Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15
 Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Lys Ser Val Ser Ser Arg
 20 25 30
 Gly Tyr Asn His Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
 35 40 45
 Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp

50	55	60															
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser																	
65	70	75	80														
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg																	
	85	90	95														
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys																	
	100	105	110														
<210>	180																
<211>	110																
<212>	PRT																
<213>	人工合成 (Artificial)																
<400>	180																
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly																	
1	5	10	15														
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Glu Ser Asn																	
	20	25	30														
Gly Tyr Asp Tyr Ile Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro																	
	35	40	45														
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Arg Asp Ser Gly Val Pro Asp																	
	50	55	60														
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser																	
65	70	75	80														
Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His Ser Arg																	
	85	90	95														
Glu Leu Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys																	
	100	105	110														
<210>	181																
<211>	110																
<212>	PRT																
<213>	人工合成 (Artificial)																
<400>	181																
Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly																	
1	5	10	15														
Glu Arg Ala Thr Ile Asn Cys Arg Ala Ser Gln Ser Val Asn Ile Asn																	
	20	25	30														
Gly Tyr Asp Tyr Leu Phe Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro																	
	35	40	45														
Lys Leu Leu Ile Tyr Leu Ala Ser Asn Leu Asp Ser Gly Val Pro Asp																	
	50	55	60														

Asp
 <210> 185
 <211> 11
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 185
 Met Asp Tyr Gly Ser Leu Tyr Ala Met Asp Tyr
 1 5 10
 <210> 186
 <211> 15
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 186
 Arg Ala Ser Gln Ser Val Arg Ser Ser Gly Tyr Asn Trp Ile Phe
 1 5 10 15
 <210> 187
 <211> 7
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 187
 Leu Ala Ser Asn Arg Asp Ser
 1 5
 <210> 188
 <211> 6
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 188
 Gln His Ser Arg Glu Leu
 1 5
 <210> 189
 <211> 15
 <212> PRT
 <213> 人工合成(Artificial)
 <400> 189
 Arg Ala Ser Lys Ser Val Ser Ser Ser Gly Tyr Asn Tyr Ile Phe
 1 5 10 15
 <210> 190
 <211> 7
 <212> PRT

<213> 人工合成 (Artificial)
<400> 190
Leu Ala Ser Asn Leu Asp Ser
1 5
<210> 191
<211> 7
<212> PRT
<213> 人工合成 (Artificial)
<400> 191
Gln Glu Ser Arg Glu Leu Pro
1 5
<210> 192
<211> 15
<212> PRT
<213> 人工合成 (Artificial)
<400> 192
Arg Ala Ser Lys Ser Val Ser Ser Ser Gly Tyr Asn Tyr Ile Phe
1 5 10 15
<210> 193
<211> 7
<212> PRT
<213> 人工合成 (Artificial)
<400> 193
Leu Ala Ser Asn Leu Asp Ser
1 5
<210> 194
<211> 7
<212> PRT
<213> 人工合成 (Artificial)
<400> 194
Gln Glu Ser Trp Glu Leu Pro
1 5
<210> 195
<211> 5
<212> PRT
<213> 人工合成 (Artificial)
<400> 195
Ser Phe Ser Met Ser
1 5

<210> 196

<211> 17

<212> PRT

<213> 人工合成(Artificial)

<400> 196

Thr Ile Asn Ser Asp Gly Ser Asn Thr Tyr Glu Pro Gly Asn Met Lys

1 5 10 15

Gly

<210> 197

<211> 9

<212> PRT

<213> 人工合成(Artificial)

<400> 197

Asp Pro Asn Trp Asp Tyr Phe Asp Phe

1 5

<210> 198

<211> 11

<212> PRT

<213> 人工合成(Artificial)

<400> 198

Lys Ala Ser Gln Asp Ile Asn Ser Tyr Leu Thr

1 5 10

<210> 199

<211> 7

<212> PRT

<213> 人工合成(Artificial)

<400> 199

Arg Ala Asn Arg Leu Val Asp

1 5

<210> 200

<211> 7

<212> PRT

<213> 人工合成(Artificial)

<400> 200

Leu Gln Tyr Asp Glu Phe Pro

1 5

<210> 201

<211> 15

<212> PRT

<213> 人工合成 (Artificial)
 <400> 201
 Arg Ala Ser Glu Ser Val Asp Asn Tyr Gly Phe Ser Phe Met Asn
 1 5 10 15
 <210> 202
 <211> 7
 <212> PRT
 <213> 人工合成 (Artificial)
 <400> 202
 Ala Val Phe Asn Gln Gly Ser
 1 5
 <210> 203
 <211> 7
 <212> PRT
 <213> 人工合成 (Artificial)
 <400> 203
 Gln Gln Thr Lys Glu Val Pro
 1 5
 <210> 204
 <211> 5
 <212> PRT
 <213> 人工合成 (Artificial)
 <400> 204
 Ser Phe Thr Ile His
 1 5
 <210> 205
 <211> 17
 <212> PRT
 <213> 人工合成 (Artificial)
 <400> 205
 Tyr Ile Asn Pro Ser Leu Gly Tyr Thr Asp Tyr Asn Pro Lys Phe Lys
 1 5 10 15
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 Gly Asp Asp Gly Tyr Tyr Glu Val Tyr

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 Gly Ala Gly Tyr Phe Asp Tyr
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Gly

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 Asp
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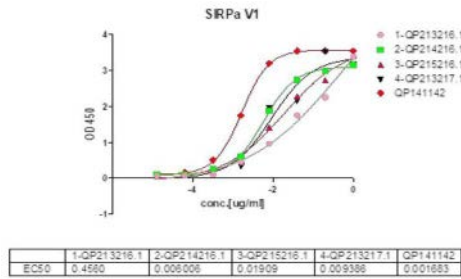


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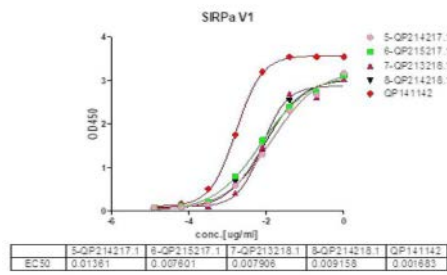


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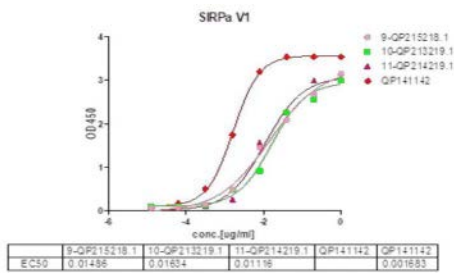


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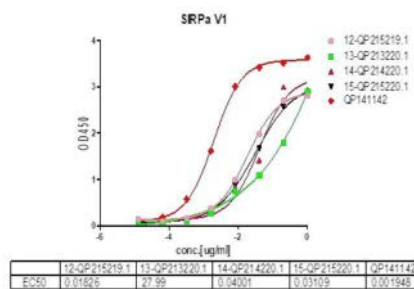


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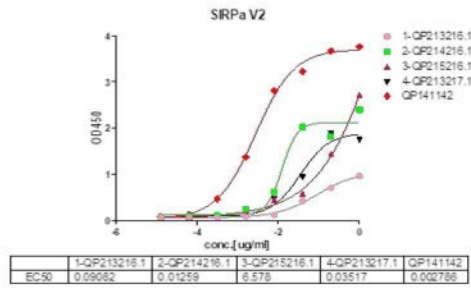


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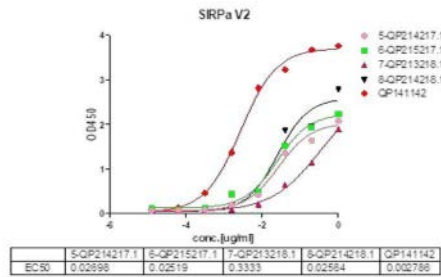


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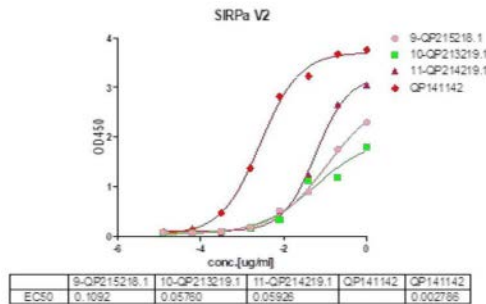


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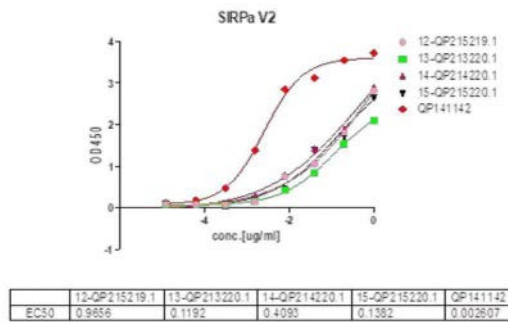


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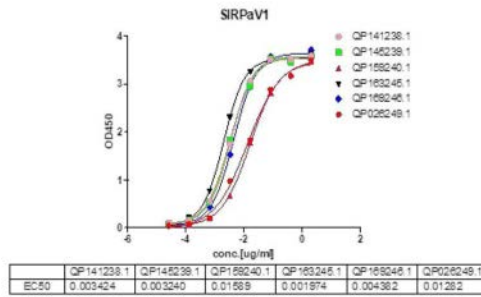


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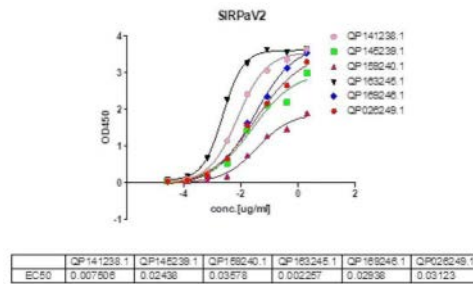


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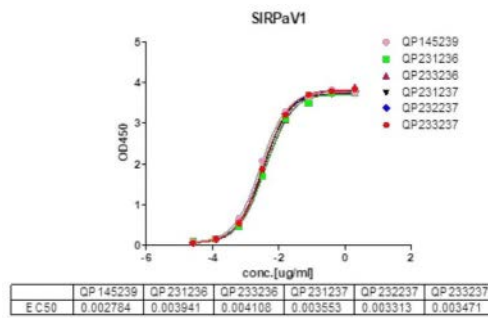


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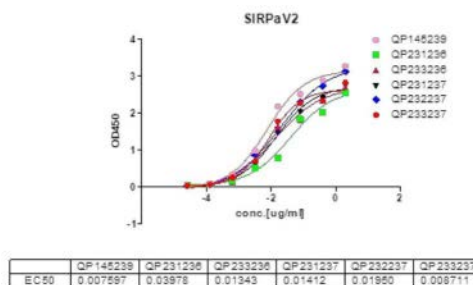


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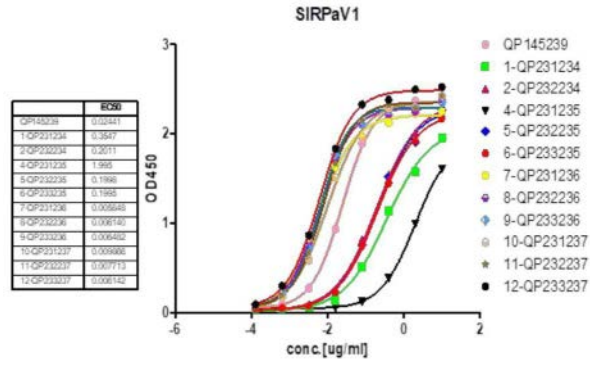


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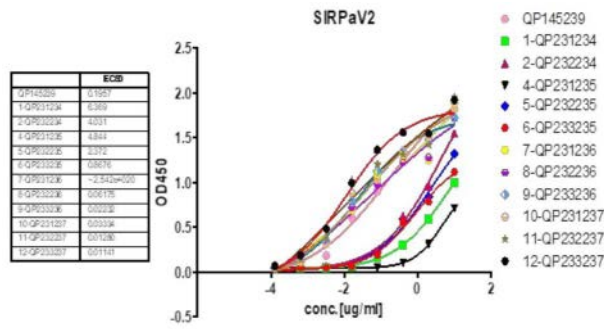


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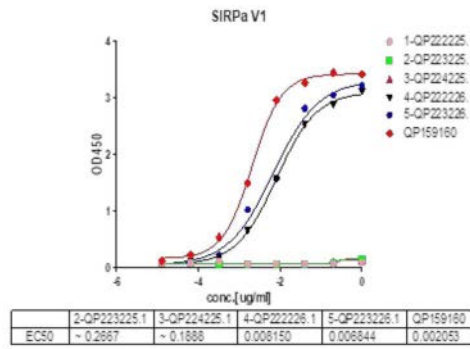


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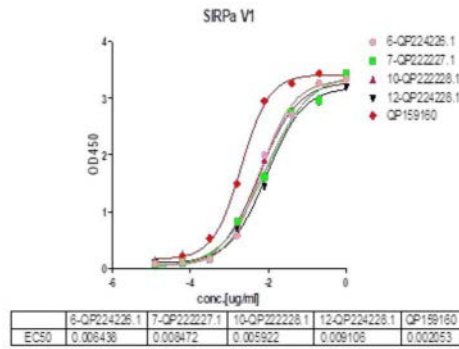


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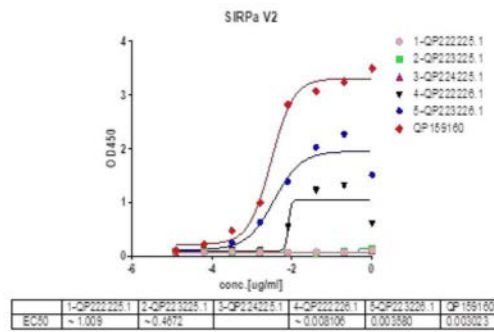


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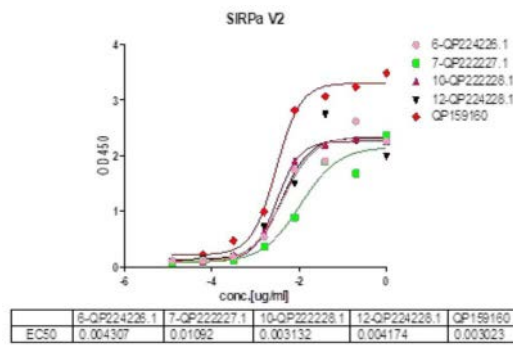


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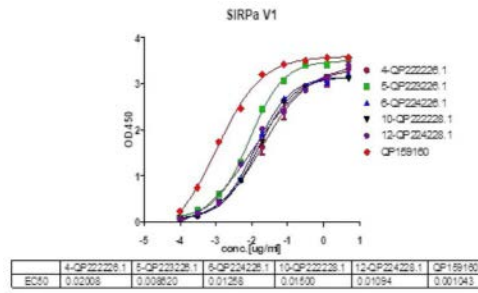


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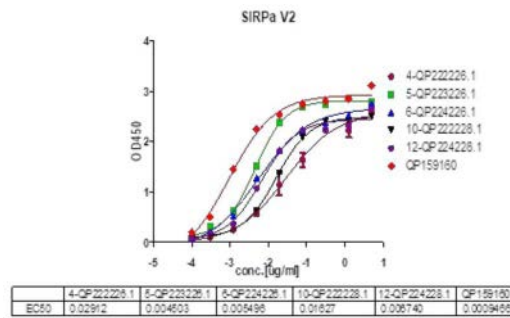


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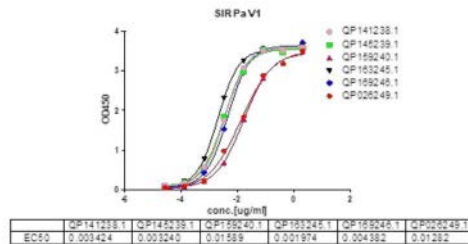


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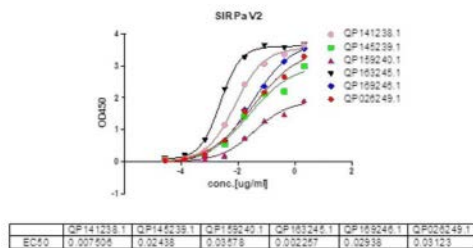


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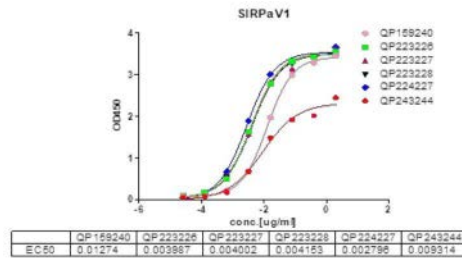


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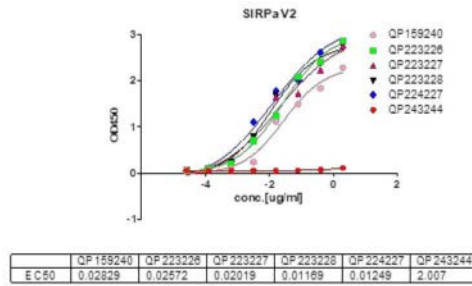


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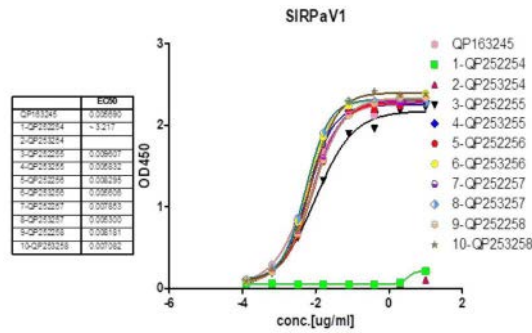


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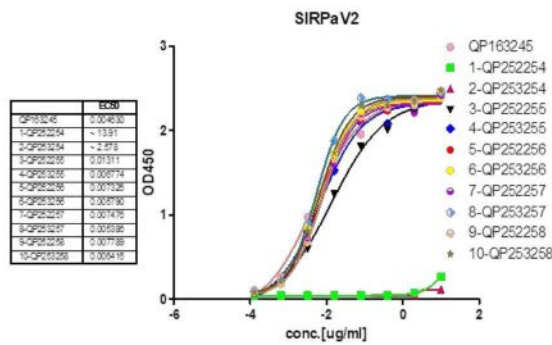


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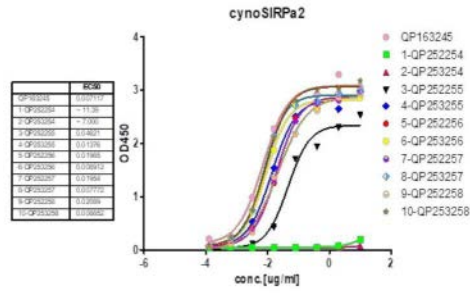


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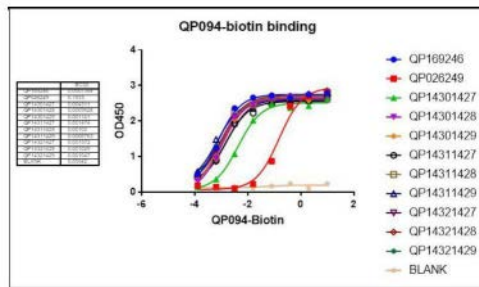


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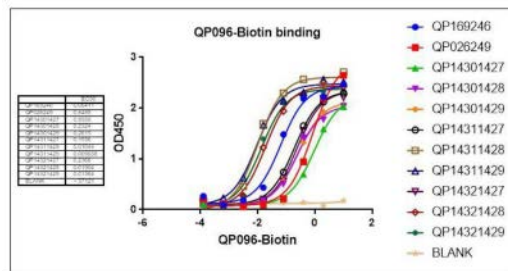


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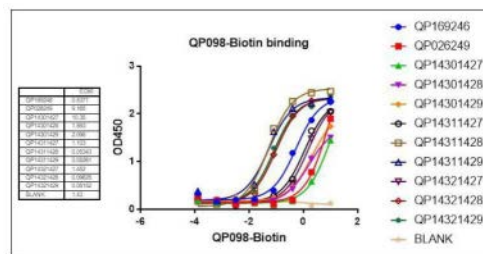


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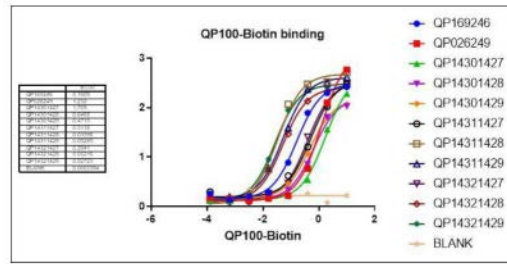


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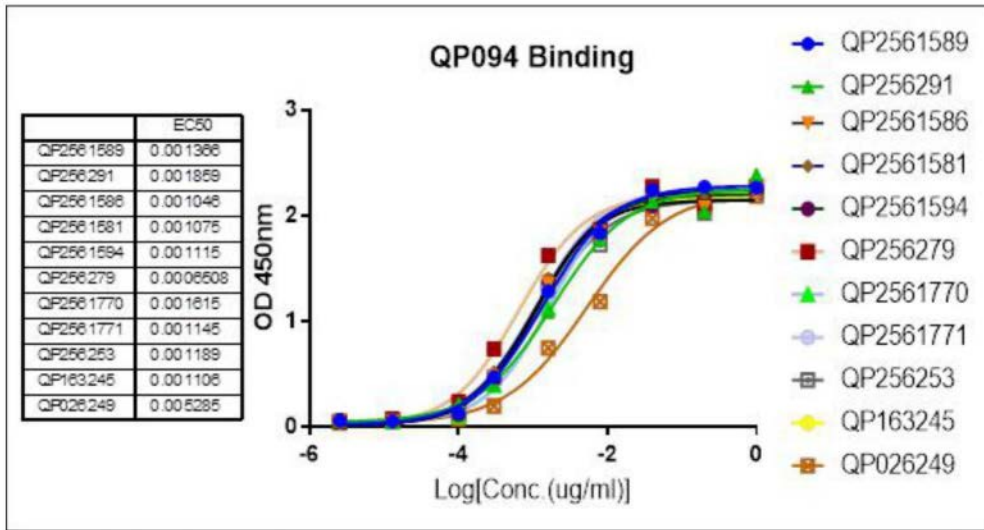


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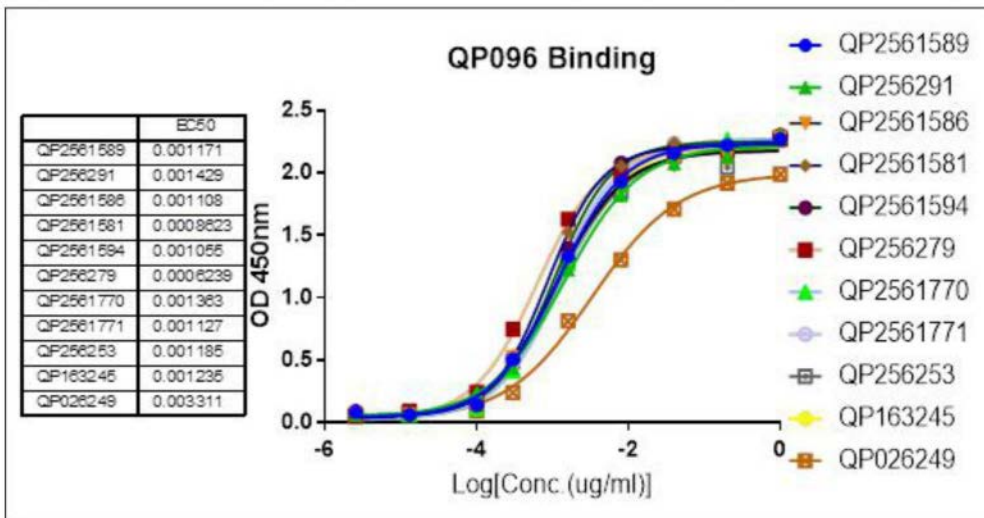


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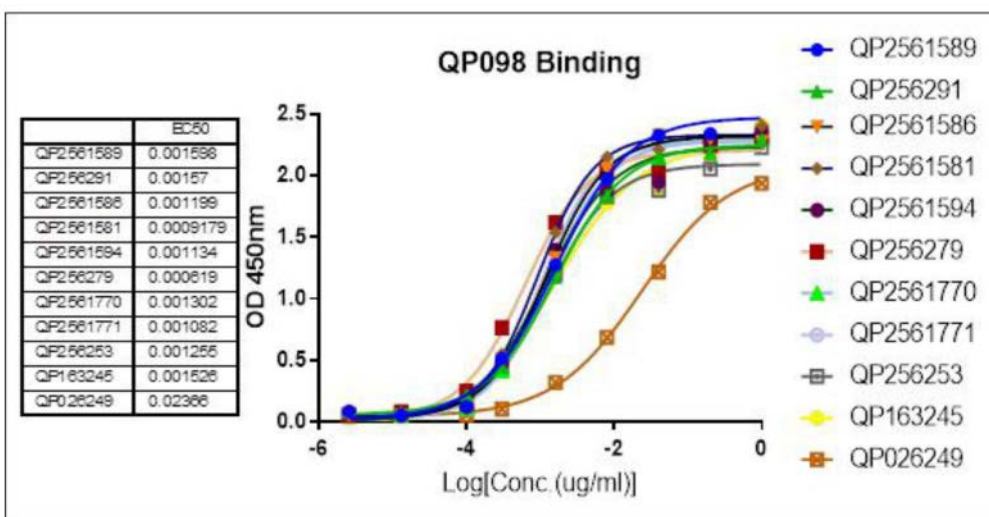


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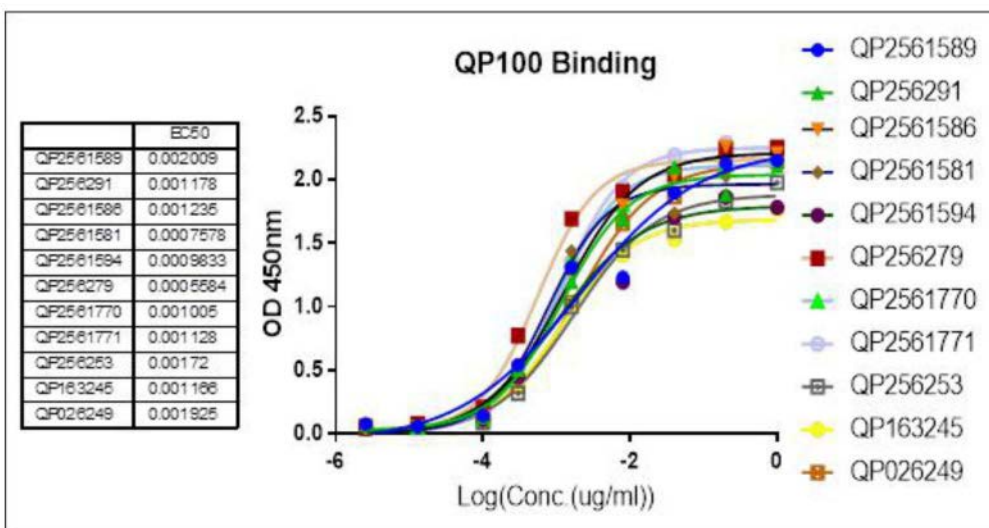


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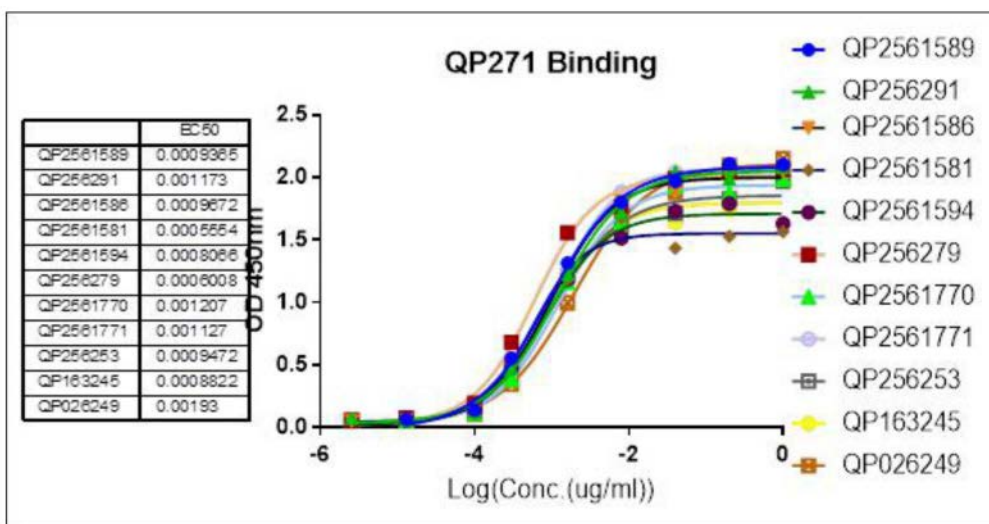


图2-5

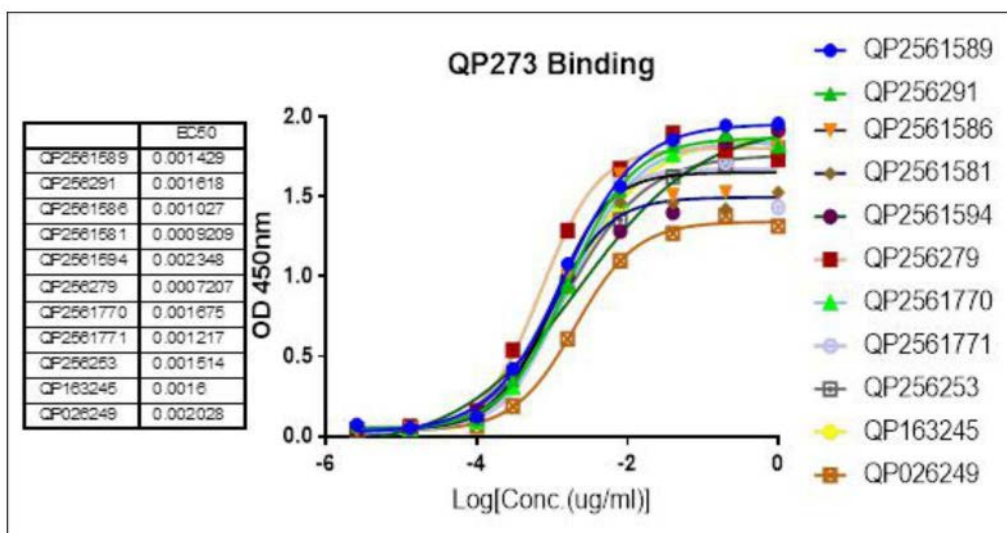


图2-6

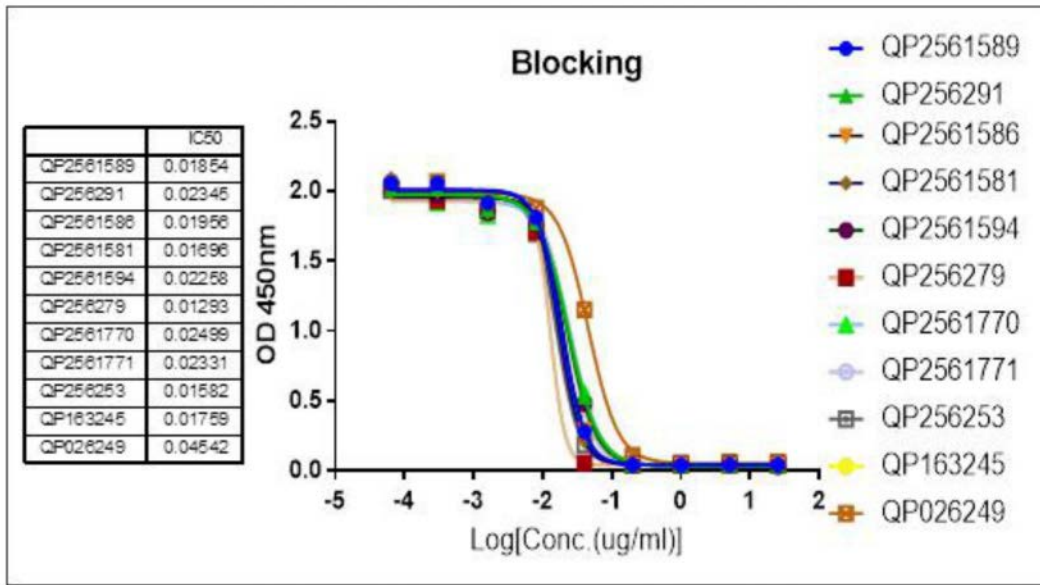


图2-7

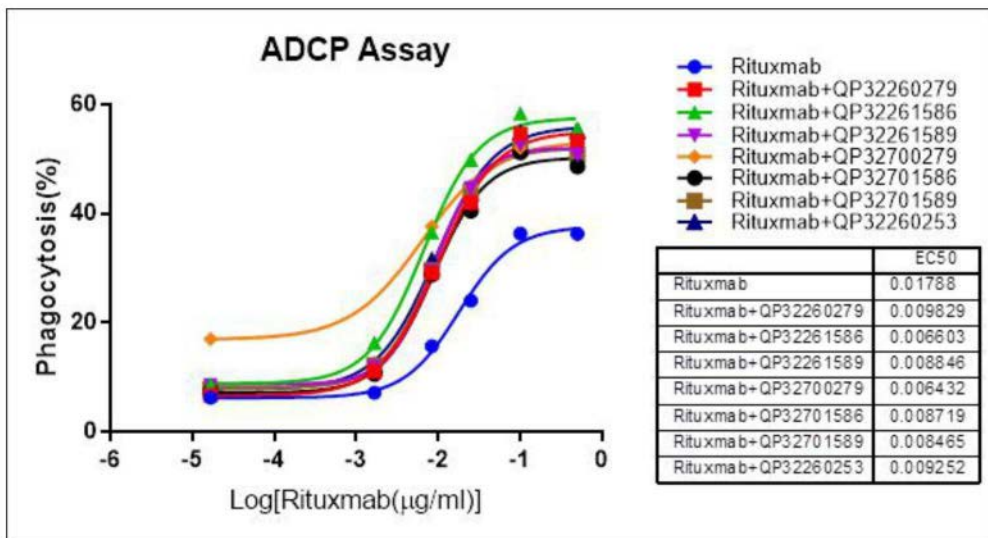


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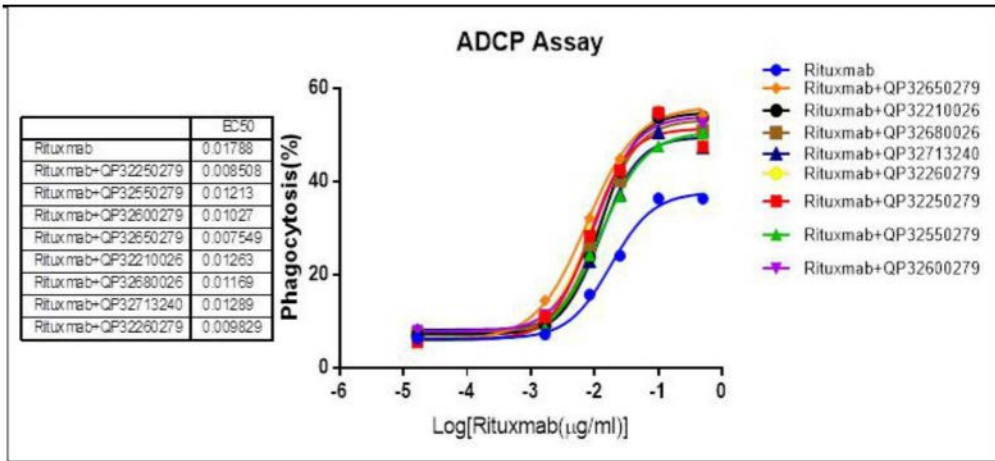


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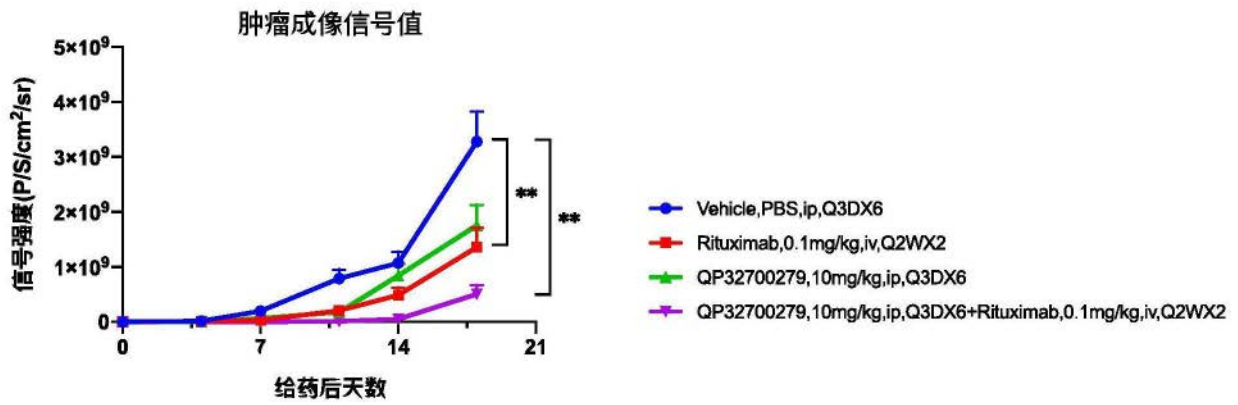


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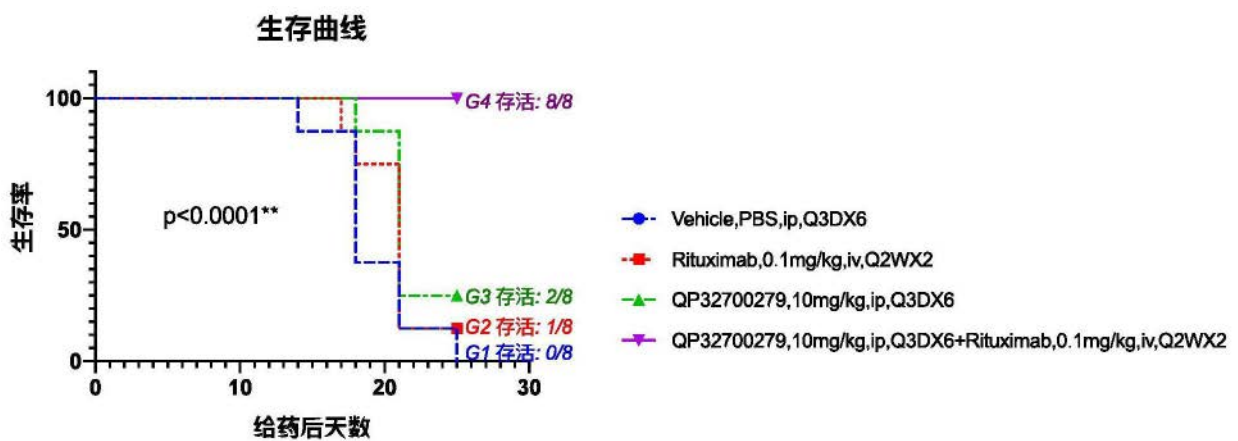


图5