What is Claimed is:

1. A peptide, comprising:

a) an N-terminal region comprising at least seven amino acid residues, the N-terminal region having a first amino acid position and a last amino acid position, wherein the N-terminal region comprises DSSPL (SEQ ID NO:121) or DASPH (SEQ ID NO:122); and

b) a C-terminal region comprising a portion of SEQ ID NO:99 [FGF19], the C-terminal region having a first amino acid position and a last amino acid position, wherein the C-terminal region comprises

i. a first C-terminal region sequence comprising WGDPIRLRHLYTSG (amino acids 16 to 29 of SEQ ID NO:99 [FGF19]), wherein the W residue corresponds to the first amino acid position of the C-terminal region; and

ii. a second C-terminal region sequence comprising PHGLSSCFLRIRADGVVDCARGQSAHSLLEIKAVALRTVAI KGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGY NVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPM VPEEPEDLRGHLESDMFSSPLETDSMDPFGLVTGLEAVRS PSFEK (amino acid residues 30 to 194 of SEQ ID NO:99 [FGF19]);

wherein the peptide

(i) binds to fibroblast growth factor receptor 4 (FGFR4) with an affinity equal to or greater than FGF19 binding affinity for FGFR4;

(ii) activates FGFR4 to an extent or amount equal to or greater than FGF19 activates FGFR4;

(iii) has at least one of reduced hepatocellular carcinoma (HCC) formation; greater glucose lowering activity, less lipid increasing activity, less triglyceride activity, less cholesterol activity, less non-HDL activity or less HDL increasing activity, as compared to FGF19, or as compared to an FGF19 variant sequence having

any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19 (SEQ ID NO:99); and/or

(iv) has less lean mass reducing activity as compared to FGF21.

2. The peptide of claim 1, wherein the second C-terminal region sequence of the peptide comprises from 1 to 5 amino acid substitutions, deletions or insertions.

3. The peptide of claim 1, wherein the peptide is less than about 250 amino acids in length.

4. The peptide of claim 1, wherein the N-terminal region comprises amino acid residues VHYG (SEQ ID NO:101), DASPHVHYG (SEQ ID NO:102), or DSSPLVHYG (SEQ ID NO:103).

5. The peptide of claim 4, wherein the G corresponds to the last position of the N-terminal region.

6. The peptide of claim 1, wherein the N-terminal region comprises amino acid residues DSSPLLQ (SEQ ID NO:104), and wherein the Q residue is the last amino acid position of the N-terminal region.

7. The peptide of claim 5, wherein the N-terminal region further comprises:

RHPIP (SEQ ID NO:106), wherein R is the first amino acid position of the N-terminal region;

HPIP (SEQ ID NO:107), wherein H is the first amino acid position of the N-terminal region;

RPLAF (SEQ ID NO:108), wherein R is the first amino acid position of the N-terminal region;

PLAF (SEQ ID NO:109), wherein P is the first amino acid position of the N-terminal region; or

R, wherein R is the first amino acid position of the N-terminal region.

8. The peptide of claim 6, wherein the N-terminal region further comprises:

RHPIP (SEQ ID NO:106), wherein R is the first amino acid position of the N-terminal region;

HPIP (SEQ ID NO:107), wherein H is the first amino acid position of the N-terminal region;

RPLAF (SEQ ID NO:108), wherein R is the first amino acid position of the N-terminal region;

PLAF (SEQ ID NO:109), wherein P is the first amino acid position of the N-terminal region; or

R, wherein R is the first amino acid position of the N-terminal region.

9. The peptide of claim 1, wherein the N-terminal region comprises amino acid residues DSSPLLQFGGQV (SEQ ID NO:105), and wherein the V residue corresponds to the last position of the N-terminal region.

10. The peptide of claim 1, wherein amino acid residues HPIP (SEQ ID NO:107) are the first 4 amino acid residues of the N-terminal region.

11. The peptide of claim 1, wherein

the first position of the N-terminal region is a R or M residue;

the first and second positions of the N-terminal region is a MR, RM, RD, DS, MD or MS sequence;

the first through third positions of the N-terminal region is a MDS, RDS, MSD, MSS, or DSS sequence;

the first through fourth positions of the N-terminal region is a RDSS (SEQ ID NO:115) or MDSS (SEQ ID NO:116) sequence;

the first through fifth positions of the N-terminal region is an MRDSS (SEQ ID NO:117) sequence;

the first through sixth positions of the N-terminal region is an MDSSPL (SEQ ID NO:119) sequence; or

the first through seventh positions of the N-terminal region is an MSDSSPL (SEQ ID NO:120) sequence.

12. The peptide of claim 1, wherein the peptide comprises an N-terminus region and a first C-terminal region having an amino acid sequence comprising or consisting of any of:

RPLAFSDASPHVHYGWGDPIRLRHLYTSG (amino acids 1-29 of SEQ ID NO:1);

PLAFSDASPHVHYGWGDPIRLRHLYTSG (amino acids 2-29 of SEQ ID NO:1);

RPLAFSDSSPLVHYGWGDPIRLRHLYTSG (amino acids 1-29 of SEQ ID NO:2);

PLAFSDSSPLVHYGWGDPIRLRHLYTSG (amino acids 2-29 of SEQ ID NO:2);

RHPIPDSSPLLQWGDPIRLRHLYTSG (amino acids 1-26 of SEQ ID NO:8);

RHPIPDSSPLLQFGWGDPIRLRHLYTSG (amino acids 1-28 of SEQ ID NO:9);

RPLAFSDSSPLVHWGDPIRLRHLYTSG (amino acids 1-27 of SEQ ID NO:26);

PLAFSDSSPLVHWGDPIRLRHLYTSG (amino acids 2-27 of SEQ ID NO:26);

HPIPDSSPLLQWGDPIRLRHLYTSG (amino acids 1-25 of SEQ ID NO:47);

RDSSPLLQWGDPIRLRHLYTSG (amino acids 1-22 of SEQ ID NO:52);

DSSPLLQWGDPIRLRHLYTSG (amino acids 2-22 of SEQ ID NO:52);

MDSSPLVHYGWGDPIRLRHLYTSG (amino acids 1-24 of SEQ ID NO:53);

RDSSPLVHYGWGDPIRLRHLYTSG (amino acids 1-24 of SEQ ID NO:69);

DSSPLVHYGWGDPIRLRHLYTSG (amino acids 2-24 of SEQ ID NO:69);

MRDSSPLVHYGWGDPIRLRHLYTSG (amino acids 1-25 of SEQ ID NO:70);

DSSPLVHYGWGDPIRLRHLYTSG (amino acids 1-23 of SEQ ID NO:141);

or

HPIPDSSPLLQFGWGDPIRLRHLYTSG (amino acids 1-27 of SEQ ID NO:163).

13. The peptide of claim 1, wherein the N-terminal region first amino acid position is a methionine (M), arginine (R), serine (S), histidine (H), proline (P), leucine (L) or aspartic acid (D) residue.

14. The peptide of claim 1, wherein the N-terminal region does not have a methionine (M) or arginine (R) residue at the first amino acid position of the N-terminal region.

15. The peptide of claim 1, wherein the N-terminal region comprises any one of the following amino acid sequences: MDSSPL (SEQ ID NO:119), MSDSSPL (SEQ ID NO:120), or SDSSPL (SEQ ID NO:112).

16. The peptide of claim 1, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:26, SEQ ID NO:47, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:69, SEQ ID NO:70; SEQ ID NO:141 or SEQ ID NO:163.

17. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NOs:1, 2, 8, 9, 26, 52 or 69, wherein the arginine (R) residue at the first amino acid position of the N-terminal region of the sequence is deleted.

18. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:1.

19. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:2.

20. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:8.

21. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:9.

22. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:26.

23. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:47.

24. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:52.

25. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:53.

26. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:141.

27. The peptide of claim 16, wherein the peptide has an amino acid sequence comprising or consisting of SEQ ID NO:163.

28. The peptide of claim 1 wherein said peptide is fused with an immunoglobulin Fc region.

29. The peptide of claim 1, wherein the peptide has at least one of reduced HCC formation; greater glucose lowering activity, or less lipid increasing activity as compared to FGF19, or as compared to an FGF19 variant having any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19 (SEQ ID NO:99).

30. The peptide of claim 29, wherein the HCC formation, glucose lowering activity, or lipid increasing activity is ascertained in a *db/db* mouse.

31. The peptide of claim 29, wherein the peptide has less lean mass reducing activity as compared to the lean mass reducing activity of FGF21.

32. The peptide of claim 31, wherein the lean mass reducing activity is ascertained in a *db/db* mouse.

33. A pharmaceutical composition, comprising the peptide of any one of claims 1 to 32, and a pharmaceutically acceptable carrier.

34. A pharmaceutical composition, comprising the peptide of any one of claims 1 to 32, a glucose lowering agent, and a pharmaceutically acceptable carrier.

35. A nucleic acid molecule encoding the peptide of any one of claims 1 to 32.

36. The nucleic acid molecule of claim 35, further comprising an expression control element in operable linkage that confers expression of the nucleic acid molecule encoding the peptide *in vitro*, in a cell or *in vivo*.

37. A vector comprising the nucleic acid molecule of claim 35.

38. The vector of claim 37, wherein the vector comprises a viral vector.

39. A transformed or host cell line that expresses the peptide of any one of claims 1 to 32.

40. A peptide having an amino acid sequence comprising or consisting of MRDSSPLVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARG QSAHSLLEIKAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDC AFEEEIRPDGYNVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPM LPMVPEEPEDLRGHLESDMFSSPLETDSMDPFGLVTGLEAVRSPSFEK (SEQ ID NO:70).

41. The peptide of claim 40, wherein the peptide has an amino acid sequence comprising SEQ ID NO:70.

42. The peptide of claim 40, wherein the peptide has an amino acid sequence consisting of SEQ ID NO:70.

43. The peptide of claim 40, wherein said peptide is fused with an immunoglobulin Fc region.

44. A peptide having an amino acid sequence comprising or consisting of RDSSPLVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQS AHSLLEIKAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAF

EEEIRPDGYNVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLP MVPEEPEDLRGHLESDMFSSPLETDSMDPFGLVTGLEAVRSPSFEK (SEQ ID NO:69).

45. The peptide of claim 44, wherein the peptide has an amino acid sequence comprising SEQ ID NO:69.

46. The peptide of claim 44, wherein the peptide has an amino acid sequence consisting of SEQ ID NO:69.

47. The peptide of claim 44, wherein said peptide is fused with an immunoglobulin Fc region.

48. A pharmaceutical composition, comprising the peptide of any one of claims 40 to 47, and a pharmaceutically acceptable carrier.

49. A pharmaceutical composition, comprising the peptide of any one of claims 40 to 47, a glucose lowering agent, and a pharmaceutically acceptable carrier.

50. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for reducing glucose levels in a subject.

51. The use of claim 50, wherein the medicament is prepared to be administered to said subject in combination with a supplementary therapy.

52. The use of claim 51, wherein said supplemental therapy is a weight loss surgery, gastric bypass, gastrectomy, gastric banding, gastric balloon, or gastric sleeve.

53. The use of claim 51, wherein said supplemental therapy is a glucose lowering agent, insulin, GLP1 analogue, biguanide, sulphonylurea, thiazolidinedione, a dipeptidyl peptidase-4 (DPP-4) inhibitor, a bromocriptine formulation, a bile acid sequestrant, metformin, a thiazolidinedione (TZD), a SGLT-2 inhibitor, or any combination thereof.

54. The use of claim 53, wherein said biguanide or sulphonylurea is selected from the group consisting of tolbutamide, chlorpropamide, acetohexamide, tolazamide, glibenclamide, glipizide or any combination thereof.

55. The use of claim 53, wherein said thiazolidinedione is rosiglitazone or pioglitazone, or combination thereof.

56. The use of claim 53, wherein said bile acid sequestrant is colesevelam.

57. The use of claim 51, wherein said supplemental therapy is administered prior to, contemporaneously with or following said method.

58. The use of claim 50, wherein the glucose levels are blood glucose levels.

59. The use of claim 50, wherein the subject has nonalcoholic fatty liver disease (NAFLD).

60. The use of claim 50, wherein the subject has nonalcoholic steatohepatitis (NASH).

61. The use of claim 50, wherein the subject has a fasting plasma glucose (FPG) level of greater than 100 mg/dl.

62. The use of claim 50, wherein the subject has an FPG level of 125 mg/dl or above.

63. The use of claim 50, wherein the subject has an FPG level of between about 100 and 125 mg/dl.

64. The use of claim 50, wherein the glucose levels are reduced by at least 5%.

65. The use of claim 50, wherein the subject has a hemoglobin A1c (HbA1c) level above 6%.

66. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of a hyperglycemic condition in a subject.

67. The use of claim 66, wherein the hyperglycemic condition is diabetes.

68. The use of claim 66, wherein the hyperglycemic condition is insulin-dependent (type I) diabetes.

69. The use of claim 66, wherein the hyperglycemic condition is type II diabetes.

70. The use of claim 66, wherein the hyperglycemic condition is gestational diabetes.

71. The use of claim 66, wherein the hyperglycemic condition is prediabetes.

72. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of insulin resistance in a subject.

73. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of hyperinsulinemia in a subject.

74. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of glucose intolerance in a subject.

75. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of a metabolic syndrome in a subject.

76. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of obesity in a subject.

77. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for reducing glucagon in a subject.

78. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for increasing glucose metabolism or homeostasis in a subject.

79. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for improving pancreatic function in a subject.

80. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for reducing triglycerides in a subject.

81. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for reducing cholesterol in a subject.

82. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for reducing IDL, LDL or VLDL levels in a subject.

83. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for decreasing blood pressure in a subject.

84. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for decreasing intimal thickening of the blood vessel in a subject.

85. Use of the peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for decreasing body mass or weight gain in a subject.

86. The peptide of any one of claims 1 to 32 and 40 to 47 for use in treating a subject having, or at risk of having, a disease or disorder treatable by the peptide.

87. The peptide of any one of claims 1 to 32 and 40 to 47 for use in reducing glucose levels in a subject.

88. The peptide of claim 87, for use in combination with a supplementary therapy.

89. The peptide of claim 88, wherein said supplemental therapy is a weight loss surgery, gastric bypass, gastrectomy, gastric banding, gastric balloon, or gastric sleeve.

90. The peptide of claim 88, wherein said supplemental therapy is a glucose lowering agent, insulin, GLP1 analogue, biguanide, sulphonylurea, thiazolidinedione, a dipeptidyl peptidase-4 (DPP-4) inhibitor, a bromocriptine formulation, a bile acid sequestrant, metformin, a thiazolidinedione (TZD), a SGLT-2 inhibitor, or any combination thereof.

91. The peptide of claim 90, wherein said biguanide or sulphonylurea is selected from the group consisting of tolbutamide, chlorpropamide, acetohexamide, tolazamide, glibenclamide, glipizide or any combination thereof.

92. The peptide of claim 90, wherein said thiazolidinedione is rosiglitazone or pioglitazone, or combination thereof.

93. The peptide of claim 90, wherein said bile acid sequestrant is colesevelam.

94. The peptide of claim 88, wherein said supplemental therapy is administered prior to, contemporaneously with or following said method.

95. The peptide of claim 87, wherein the glucose levels are blood glucose levels.

96. The peptide of claim 87, wherein the subject has nonalcoholic fatty liver disease (NAFLD).

97. The peptide of claim 87, wherein the subject has nonalcoholic steatohepatitis (NASH).

98. The peptide of claim 87, wherein the subject has a fasting plasma glucose (FPG) level of greater than 100 mg/dl.

99. The peptide of claim 87, wherein the subject has an FPG level of 125 mg/dl or above.

100. The peptide of claim 87, wherein the subject has an FPG level of between about 100 and 125 mg/dl.

101. The peptide of claim 87, wherein the glucose levels are reduced by at least 5%.

102. The peptide of claim 87, wherein the subject has a hemoglobin A1c (HbA1c) level above 6%.

103. The peptide of any one of claims 1 to 32 and 40 to 47 for use in the treatment of a hyperglycemic condition in a subject.

104. The peptide of claim 103, wherein the hyperglycemic condition is diabetes.

105. The peptide of claim 103, wherein the hyperglycemic condition is insulin-dependent (type I) diabetes.

106. The peptide of claim 103, wherein the hyperglycemic condition is type II diabetes.

107. The peptide of claim 103, wherein the hyperglycemic condition is gestational diabetes.

108. The peptide of claim 103, wherein the hyperglycemic condition is prediabetes.

109. The peptide of any one of claims 1 to 32 and 40 to 47 for use in the treatment of insulin resistance in a subject.

110. The peptide of any one of claims 1 to 32 and 40 to 47 in the manufacture of a medicament for the treatment of hyperinsulinemia in a subject.

111. The peptide of any one of claims 1 to 32 and 40 to 47 for use in the treatment of glucose intolerance in a subject.

112. The peptide of any one of claims 1 to 32 and 40 to 47 for use in the treatment of a metabolic syndrome in a subject.

113. The peptide of any one of claims 1 to 32 and 40 to 47 for use in the treatment of obesity in a subject.

114. The peptide of any one of claims 1 to 32 and 40 to 47 for use in reducing glucagon in a subject.

115. The peptide of any one of claims 1 to 32 and 40 to 47 for use in increasing glucose metabolism or homeostasis in a subject.

116. The peptide of any one of claims 1 to 32 and 40 to 47 for use in improving pancreatic function in a subject.

117. The peptide of any one of claims 1 to 32 and 40 to 47 for use in reducing triglycerides in a subject.

118. The peptide of any one of claims 1 to 32 and 40 to 47 for use in reducing cholesterol in a subject.

119. The peptide of any one of claims 1 to 32 and 40 to 47 for use in reducing IDL, LDL or VLDL levels in a subject.

120. The peptide of any one of claims 1 to 32 and 40 to 47 for use in decreasing blood pressure in a subject.

121. The peptide of any one of claims 1 to 32 and 40 to 47 for use in decreasing intimal thickening of the blood vessel in a subject.

122. The peptide of any one of claims 1 to 32 and 40 to 47 for use in decreasing body mass or weight gain in a subject.

What is Claimed is:

1. A chimeric peptide sequence, comprising:
   a) an N-terminal region comprising at least seven amino acid residues, the N-terminal region having a first amino acid position and a last amino acid position, wherein the N-terminal region comprises DSSPL or DASPH; and
   b) a C-terminal region comprising a portion of SEQ ID NO:99 [FGF19], the C-terminal region having a first amino acid position and a last amino acid position,
   wherein the C-terminal region comprises amino acid residues 16-29 of SEQ ID NO:99 [FGF19], WGDPIRLRHLYTSG, wherein the W residue corresponds to the first amino acid position of the C-terminal region.

2. A chimeric peptide sequence, comprising:
   a) an N-terminal region comprising a portion of SEQ ID NO:100 [FGF21], the N-terminal region having a first amino acid position and a last amino acid position,
   wherein the N-terminal region comprises amino acid residues GQV, and wherein the V residue corresponds to the last amino acid position of the N-terminal region; and
   b) a C-terminal region comprising a portion of SEQ ID NO:99 [FGF19], the C-terminal region having a first amino acid position and a last amino acid position, wherein the C-terminal region comprises amino acid residues 21-29 of SEQ ID NO:99 [FGF19], RLRHLYTSG, and wherein the R residue corresponds to the first position of the C-terminal region.

3. A chimeric peptide sequence, comprising:
   a) an N-terminal region comprising a portion of SEQ ID NO:100 [FGF21], the N-terminal region having a first amino acid position and a last amino acid position,
   wherein the N-terminal region comprises at least 5 contiguous amino acids of SEQ ID NO:100 [FGF21] including the amino acid residues GQV, and wherein the V residue corresponds to the last amino acid position of the N-terminal region; and
   b) a C-terminal region comprising a portion of SEQ ID NO:99 [FGF19], the C-terminal region having a first amino acid position and a last amino acid position, wherein the C-terminal region comprises amino acid residues 21-29 of SEQ ID NO:99 [FGF19], RLRHLYTSG, and wherein the R residue corresponds to the first position of the C-terminal region.

4. The peptide sequence of claim 3, wherein the N-terminal region comprises at least 6 contiguous amino acids of SEQ ID NO:100 [FGF21] including the amino acid residues GQV.

5. The peptide sequence of claim 3, wherein the N-terminal region comprises at least 7 contiguous amino acids of SEQ ID NO:100 [FGF21] including the amino acid residues GQV.

6. A peptide sequence, comprising or consisting of any of:
a) a fibroblast growth factor 19 (FGF19) sequence variant having one or more amino acid substitutions, insertions or deletions compared to a reference or wild type FGF19;
b) a fibroblast growth factor 21 (FGF21) sequence variant having one or more amino acid substitutions, insertions or deletions compared to a reference or wild type FGF21;
c) a portion of an FGF19 sequence fused to a portion of an FGF21 sequence; or
d) a portion of an FGF19 sequence fused to a portion of an FGF21 sequence, wherein the FGF19 and/or FGF21 sequence portion(s) have one or more amino acid substitutions, insertions or deletions compared to a reference or wild type FGF19 and/or FGF21.

7. The peptide sequence of claim 6, wherein the peptide sequence has amino-terminal amino acids 1-16 of SEQ ID NO:100 [FGF21] fused to carboxy-terminal amino acids 21-194 of SEQ ID NO:99 [FGF19], or wherein the peptide sequence has amino-terminal amino acids 1-147 of SEQ ID NO:99 [FGF19] fused to carboxy-terminal amino acids 147-181 of SEQ ID NO:100 [FGF21] (M41), or wherein the peptide sequence has amino-terminal amino acids 1-20 of SEQ ID NO:99 [FGF19] fused to carboxy-terminal amino acids 17-181 of SEQ ID NO:100 [FGF21] (M44), or wherein the peptide sequence has amino-terminal amino acids 1-146 of SEQ ID NO:100 [FGF21] fused to carboxy-terminal amino acids 148-194 of SEQ ID NO:99 [FGF19] (M45), or wherein the peptide sequence has amino-terminal amino acids 1-20 of SEQ ID NO:99 [FGF19] fused to internal amino acids17-146 of SEQ ID NO:100 [FGF21] fused to carboxy-terminal amino acids 148-194 of SEQ ID NO:99 [FGF19] (M46).

8. The chimeric peptide sequence or peptide sequence of claims 1, 2 or 6, wherein the peptide sequence has a WGDPI sequence motif corresponding to the WGDPI sequence of amino acids 16-20 of SEQ ID NO:99 [FGF19].

9. The chimeric peptide sequence or peptide sequence of claim 8, wherein the peptide sequence maintains or increases an FGFR4 mediated activity.

10. The chimeric peptide sequence or peptide sequence of claims 1, 2 or 6, wherein the peptide sequence has a substituted, mutated or absent WGDPI sequence motif corresponding to FGF19 WGDPI sequence of amino acids 16-20 of FGF19.

11. The chimeric peptide sequence or peptide sequence of claim 10, wherein the WGDPI sequence has one or more amino acids substituted, mutated or absent.

12. The chimeric peptide sequence or peptide sequence of claims 1, 2 or 6, wherein the peptide sequence is distinct from an FGF 19 variant sequence having any of GQV GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the FGF19 WGDPI sequence at amino acids 16-20.

13. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the N-terminal or C-terminal region is from about 20 to about 200 amino acid residues in length.

14. The chimeric peptide sequence of claim 1, wherein the N-terminal region comprises amino acid residues VHYG, wherein the N-terminal region comprises amino acid residues DASPHVHYG, or wherein the N-terminal region comprises amino acid residues DSSPLVHYG.

15. The chimeric peptide sequence of claim 14, wherein the G corresponds to the last position of the N-terminal region.

16. The chimeric peptide sequence of claims 1 or 6, wherein the N-terminal region comprises amino acid residues DSSPLLQ, and wherein the Q residue is the last amino acid position of the N-terminal region.

17. The chimeric peptide sequence of claim 15 or 16, wherein the N-terminal region further comprises: RHPIP, wherein R is the first amino acid position of the N-terminal region; or HPIP, wherein H is the first amino acid position of the N-terminal region; or RPLAF, wherein R is the first amino acid position of the N-terminal region; or PLAF, wherein P is the first amino acid position of the N-terminal region; or R, wherein R is the first amino acid position of the N-terminal region.

18. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence comprises or consists of any of M1-M98 variant peptide sequences, or a subsequence or fragment of any of the M1-M98 variant peptide sequences.

19. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence comprises or consists of any of:
RDSSPLVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEI
KAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYR
SEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSS
PLETDSMDPFGLVTGLEAVRSPSFEK (M69);
RDSSPLLQWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEIKAV
ALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYRSEK
HRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSSPLE
TDSMDPFGLVTGLEAVRSPSFEK (M52);
HPIPDSSPLLQFGGQVRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEI
KAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYR
SEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSS
PLETDSMDPFGLVTGLEAVRSPSFEK (M5);
HPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIREDGTVGGAADQSPESLLQL
KALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLEDGYNVYQSE
AHSLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPALPEPPGILAPQPPDVGSSDPLS
MVGPSQGRSPSYAS (M71);
HPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIREDGTVGGAADQSPESLLQL
KALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLEDGYNVYQSE
AHGLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPAPPEPPGILAPQPPDVGSSDPLS
MVGPSQGRSPSYAS (M72);
HPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIREDGTVGGAADQSPESLLQL
KALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLEDGYNVYQSE
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SEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSS
PLETDS16MDPFGLVTGLEAVRSPSFEK (M70), or a subsequence or fragment of any of the foregoing peptide sequences, or any of the foregoing peptide sequences wherein the R-terminal residue is deleted.

20. The chimeric peptide sequence of claims 1 or 2, wherein the N-terminal region comprises amino acid residues DSSPLLQFGGQV, and wherein the V residue corresponds to the last position of the N-terminal region.

21. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein amino acid residues HPIP are the first 4 amino acid residues of the N-terminal region.

22. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3, 6 or 19, wherein the first position of the N-terminal region is an R residue, or wherein the first position of the N-terminal region is an M residue, or wherein the first and second positions of the N-terminal region is an MR sequence, or wherein the first and second positions of the N-terminal region is an RM sequence, or wherein the first and second positions of the N-terminal region is an RD sequence, or wherein the first and second positions of the N-terminal region is an DS sequence, or wherein the first and second positions of the N-terminal region is an MD sequence, or wherein the first and second positions of the N-terminal region is an MS sequence, or wherein the first through third positions of the N-terminal region is an MDS sequence, or wherein the first through third positions of the N-terminal region is an RDS sequence, or wherein the first through third positions of the N-terminal region is an MSD sequence, or wherein the first through third positions of the N-terminal region is an MSS sequence, or wherein the first through third positions of the N-terminal region is an DSS sequence, or wherein the first through fourth positions of the N-terminal region is an RDSS sequence, or wherein the first through fourth positions of the N-terminal region is an MDSS sequence, or wherein the first through fifth positions of the N-terminal region is an MRDSS sequence, or wherein the first through fifth positions of the N-terminal region is an MSSPL sequence, or wherein the first through sixth positions of the N-terminal region is an MDSSPL sequence, or wherein the first through seventh positions of the N-terminal region is an MSDSSPL sequence.

23. The chimeric peptide sequence or peptide sequence of any one of claims 1 to 3 or 6, wherein the last position of the C-terminal region corresponds to about residue 194 of SEQ ID NO:99 [FGF19].

24. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence comprises or consists of:
HPIPDSSPLLQFGGQVRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEI
KAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYR

SEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSS PLETDSMDPFGLVTGLEAVRSPSFEK, or a subsequence or fragment thereof; or DSSPLLQFGGQVRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEIKAV ALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYRSEK HRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSSPLE TDSMDPFGLVTGLEAVRSPSFEK, or a subsequence or fragment thereof; RPLAFSDASPHVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAH SLLEIKAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGY NVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESD MFSSPLETDSMDPFGLVTGLEAVRSPSFEK, or a subsequence or fragment thereof; RPLAFSDSSPLVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAH SLLEIKAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGY NVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESD MFSSPLETDSMDPFGLVTGLEAVRSPSFEK, or a subsequence or fragment thereof; DSSPLVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSAHSLLEIK AVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDGYNVYRS EKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLESDMFSSP LETDSMDPFGLVTGLEAVRSPSFEK, or a subsequence or fragment thereof.

25. The chimeric peptide sequence or peptide sequence of claim 18, 19 or 24, wherein the subsequence or fragment thereof has 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more amino acid deletions from the amino terminus, the carboxy-terminus or internally.

26. The chimeric peptide sequence of claims 1, 2 or 6, wherein said N-terminal region, or said C-terminal region, comprises or consists of an amino acid sequence of about 5 to 10, 10 to 20, 20 to 30, 30 to 40, 40 to 50, 60 to 70, 70 to 80, 80 to 90, 90 to 100 or more amino acids.

27. The peptide sequence of claims 3 or 6, wherein said FGF19 sequence portion, or said FGF21 sequence portion, comprises or consists of an amino acid sequence of about 5 to 10, 10 to 20, 20 to 30, 30 to 40, 40 to 50, 50 to 60, 60 to 70, 70 to 80, 80 to 90, 90 to 100 or more amino acids of FGF19 or FGF21.

28. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein said N-terminal region, or said C-terminal region, or said FGF19 sequence portion, or said FGF21 sequence portion, are joined by a linker or spacer.

29. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the N-terminus of the peptide sequence at comprises or consists of any of: HPIPDSSPLLQFGGQVRLRHLYTSG (M5); DSSPLLQFGGQVRLRHLYTSG (M6); RPLAFSDSSPLLQFGGQVRLRHLYTSG (M7); HPIPDSSPLLQWGDPIRLRHLYTSG (M8); HPIPDSSPLLQFGWGDPIRLRHLYTSG (M9); HPIPDSSPHVHYGWGDPIRLRHLYTSG (M10); RPLAFSDAGPLLQWGDPIRLRHLYTSG (M11); RPLAFSDAGPLLQFGWGDPIRLRHLYTSG (M12); RPLAFSDAGPLLQFGGQVRLRHLYTSG (M13); HPIPDSSPHVHYGGQVRLRHLYTSG (M14); RPLAFSDAGPHVHWGDPIRLRHLYTSG (M15); RPLAFSDAGPHVHWGDPIRLRHLYTSG (M16); RPLAFSDAGPHVGWGDPIRLRHLYTSG (M17); RPLAFSDAGPHYGWGDPIRLRHLYTSG (M18); RPLAFSDAGPVYGWGDPIRLRHLYTSG (M19); RPLAFSDAGPVHGWGDPIRLRHLYTSG (M20); RPLAFSDAGPVHYWGDPIRLRHLYTSG (M21); RPLAFSDAGPHVHGWGDPIRLRHLYTSG (M22); RPLAFSDAGPHHGWGDPIRLRHLYTSG (M23); RPLAFSDAGPHHYWGDPIRLRHLYTSG (M24); RPLAFSDAGPHVYWGDPIRLRHLYTSG (M25); RPLAFSDSSPLVHWGDPIRLRHLYTSG (M26); RPLAFSDSSPHVHWGDPIRLRHLYTSG (M22); RPLAFSDAGPHVWGDPIRLRHLYTSG (M28); RPLAFSDAGPHVHYWGDPIRLRHLYTSG (M29); RPLAFSDAGPHVHYAWGDPIRLRHLYTSG (M30); RHPIPDSSPLLQFGAQVRLRHLYTSG (M31); RHPIPDSSPLLQFGDQVRLRHLYTSG (M32); RHPIPDSSPLLQFGPQV RLRHLYTSG (M33); RHPIPDSSPLLQFGGAVRLRHLYTSG (M34); RHPIPDSSPLLQFGGEVRLRHLYTSG (M35); RHPIPDSSPLLQFGGNVRLRHLYTSG (M36); RHPIPDSSPLLQFGGQARLRHLYTSG (M37); RHPIPDSSPLLQFGGQIRLRHLYTSG (M38); RHPIPDSSPLLQFGGQT RLRHLYTSG (M39);RHPIPDSSPLLQFGWGQPVRLRHLYTSG (M40); DAGPHVHYGWGDPIRLRHLYTSG (M74); VHYGWGDPIRLRHLYTSG (M75);

RLRHLYTSG (M77); or any of the foregoing peptide sequences wherein the amino terminal R residue is deleted.

30. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the N-terminus of the peptide sequence at comprises or consists of any of: RHPIPDSSPLLQFGWGDPIRLRHLYTSG; RHPIPDSSPLLQWGDPIRLRHLYTSG; RPLAFSDAGPLLQFGWGDPIRLRHLYTSG; RHPIPDSSPHVHYGWGDPIRLRHLYTSG; RPLAFSDAGPLLQFGGQVRLRHLYTSG; RHPIPDSSPHVHYGGQVRLRHLYTSG; RPLAFSDAGPHVHYGGDIRLRHLYTSG; RDSSPLLQFGGQVRLRHLYTSG; RPLAFSDSSPLLQFGGQVRLRHLYTSG; RHPIPDSSPLLQFGAQVRLRHLYTSG; RHPIPDSSPLLQFGDQVRLRHLYTSG; RHPIPDSSPLLQFGPQVRLRHLYTSG; RHPIPDSSPLLQFGGAVRLRHLYTSG; RHPIPDSSPLLQFGGEVRLRHLYTSG; RHPIPDSSPLLQFGGNVRLRHLYTSG; RHPIPDSSPLLQFGGQARLRHLYTSG; RHPIPDSSPLLQFGGQIRLRHLYTSG; RHPIPDSSPLLQFGGQTRLRHLYTSG; RHPIPDSSPLLQFGWGQPVRLRHLYTSG; or any of the foregoing peptide sequences wherein the amino terminal R residue is deleted.

31. The chimeric peptide sequence or peptide sequence of claims 29 or 30, wherein the peptide sequence further comprises the addition of amino acid residues 30-194 of SEQ ID NO:99 [FGF19] at the C-terminus, resulting in a chimeric polypeptide.

32. The chimeric peptide sequence or peptide sequence of any of claims 29 or 30, wherein the peptide sequence further comprises all or a portion of an FGF19 sequence set forth as: PHGLSSCFLRIRADGVVDCARGQSAHSLLEIKAVALRTVAIKGVHSVRYLCMGA DGKMQGLLQYSEEDCAFEEEIRPDGYNVYRSEKHRLPVSLSSAKQRQLYKNRGF LPLSHFLPMLPMVPEEPEDLRGHLESDMFSSPLETDSMDPFGLVTGLEAVRSPSFE K positioned at the C-terminus of the peptide, or wherein the amino terminal "R" residue is deleted from the peptide.

33. A subsequence of a chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the subsequence has at least one amino acid deletion.

34. The subsequence of claim 33, wherein the subsequence has 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 or more amino acid deletions from the amino terminus, the carboxy-terminus or internally.

35. The peptide sequence of claim 6, wherein the reference or wild type FGF19 sequence is set forth as:
RPLAFSDAGPHVHYGWGDPIRLRHLYTSGPHGLSSCFLRIRADGVVDCARGQSA HSLLEIKAVALRTVAIKGVHSVRYLCMGADGKMQGLLQYSEEDCAFEEEIRPDG YNVYRSEKHRLPVSLSSAKQRQLYKNRGFLPLSHFLPMLPMVPEEPEDLRGHLES DMFSSPLETDSMDPFGLVTGLEAVRSPSFEK (SEQ ID NO:99).

36. The peptide sequence of claim 6, wherein the reference or wild type FGF21 sequence is set forth as:
RHPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIREDGTVGGAADQSPESLLQ LKALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLEDGYNVYQS EAHGLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPALPEPPGILAPQPPDVGSSDPL SMVGPSQGRSPSYAS (SEQ ID NO:100).

37. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the N-terminal region first amino acid position is a "M" residue, an "R" residue, a "S" residue, a "H" residue, a "P" residue, a "L" residue or an "D" residue, or wherein the peptide sequence does not have a "M" residue or an "R" residue at the first amino acid position of the N-terminal region.

38. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the N-terminal region comprises any one of the following sequences: MDSSPL, MSDSSPL, SDSSPL, MSSPL or SSPL.

39. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has reduced hepatocellular carcinoma (HCC) formation compared to FGF19, or an FGF 19 variant sequence having any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19.

40. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has greater glucose lowering activity compared to FGF19, or an FGF 19 variant sequence having any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19.

41. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has less lipid increasing activity compared to FGF19, or an FGF 19 variant sequence having any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19.

42. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has less triglyceride, cholesterol, non-HDL or HDL increasing activity compared to FGF19, or an FGF 19 variant sequence having any of GQV, GDI, WGPI, WGDPV, WGDI, GDPI, GPI, WGQPI, WGAPI, AGDPI, WADPI, WGDAI, WGDPA, WDPI, WGDI, WGDP or FGDPI substituted for the WGDPI sequence at amino acids 16-20 of FGF19.

43. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has less lean mass reducing activity compared to FGF21.

44. The chimeric peptide sequence or peptide sequence of any of claims 39 to 43, wherein the hepatocellular carcinoma (HCC) formation, glucose lowering activity, lipid increasing activity, or lean mass reducing activity is ascertained in a *db/db* mouse.

45. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence binds to fibroblast growth factor receptor 4 (FGFR4) or activates FGFR4, or does not detectably bind to fibroblast growth factor receptor 4 (FGFR4) or activate FGFR4.

46. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence binds to FGFR4 with an affinity less than, comparable to or greater than FGF19 binding affinity for FGFR4.

47. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence activates FGFR4 to an extent or amount less than, comparable to or greater than FGF19 activates FGFR4.

48. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence has 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 amino acid substitutions, deletions or insertions.

49. The chimeric peptide sequence or peptide sequence of claim 48, wherein the amino acid deletions are at the N- or C-terminus, or internal.

50. The chimeric peptide sequence or peptide sequence of claim 48, wherein the amino acid substitution, or deletion is at any of amino acid positions 8-20 of FGF19 (AGPHVHYGWGDPI).

51. The chimeric peptide sequence or peptide sequence of any of claims 1 to 3 or 6, wherein the peptide sequence comprises one or more L-amino acids, D-amino acids, non-naturally occurring amino acids, or amino acid mimetic, derivative or analogue.

52. A composition, comprising the chimeric peptide sequence or peptide sequence of any of claims 1 to 51.

53. A pharmaceutical composition, comprising the chimeric peptide sequence or peptide sequence of any of claims 1 to 51.

54. A pharmaceutical composition, comprising the chimeric peptide sequence or peptide sequence of any of claims 1 to 51, and a glucose lowering agent.

55. The chimeric peptide sequence or peptide sequence of any of claims 1 to 51, wherein the peptide sequence is isolated or purified.

56. A nucleic acid molecule encoding the chimeric peptide sequence or peptide sequence of any of claims 1 to 51.

57. The nucleic acid molecule of claim 56, further comprising an expression control element in operable linkage that confers expression of the nucleic acid molecule encoding the peptide in vitro, in a cell or in vivo.

58. A vector comprising the nucleic acid molecule of claims 56 or 57.

59. The vector of claim 58, wherein the vector comprises a viral vector.

60. A transformed or host cell that expresses the chimeric peptide sequence or peptide sequence of any of claims 1 to 51.

61. Use of a chimeric peptide sequence or peptide sequence of any of claims 1 to 51

in the manufacture of a medicament for treating a subject having, or at risk of having, a disease or disorder treatable by the chimeric peptide sequence or peptide sequence.

62. The use of claim 61, wherein the disease or disorder comprises a hyperglycemic condition, insulin resistance, hyperinsulinemia, glucose intolerance or metabolic syndrome.

63. The use of claim 62, wherein the hyperglycemic condition comprises diabetes.

64. The use of claim 62, wherein the hyperglycemic condition comprises insulin-dependent (type I) diabetes, type II diabetes, or gestational diabetes.

65. The use of claim 61, wherein the disorder comprises obesity or an undesirable body mass.

66. Use of a chimeric peptide sequence or peptide sequence of any of claims 1 to 51 in the manufacture of a medicament for improving glucose metabolism in a subject in need thereof.

67. The use of claim 63, wherein the subject has a fasting plasma glucose level greater than 100 mg/dl or has a hemoglobin A1c (HbA1c) level above 6%.

68. The use of claims 63 or 67, wherein the medicament results in reduced glucose levels, increased insulin sensitivity, reduced insulin resistance, reduced glucagon, an improvement in glucose tolerance, or glucose metabolism or homeostasis, improved pancreatic function, a reduced triglyceride, cholesterol, IDL, LDL or VLDL levels, a decrease in blood pressure, a decrease in intimal thickening of the blood vessel, or a decrease in body mass or weight gain.

69. An *in vitro* method for identifying a peptide sequence having glucose lowering activity without substantial hepatocellular carcinoma (HCC) activity, comprising:
a) providing a candidate peptide sequence;

b) measuring glucose levels in a sample obtained of an animal after administration of the candidate peptide sequence, to determine if the candidate peptide sequence reduces glucose levels; and
c) analyzing the candidate peptide sequence for induction of HCC in the animal, or expression of a marker correlating with HCC activity, wherein a candidate peptide having glucose lowering activity and not substantial HCC activity thereby identifies the

candidate peptide sequence as a peptide sequence having glucose lowering activity without substantial hepatocellular carcinoma (HCC) activity.

70. The method of claim 69, wherein the test animal is a db/db mouse.

71. The method of claim 69, further comprising assessing a hepatic tissue sample obtained from the test animal to determine whether the candidate peptide sequence exhibits evidence of inducing HCC.

72. The method of claim 69, wherein the marker correlating with HCC activity comprises lipid profile, and wherein less lipid increasing activity compared to FGF19 indicates the peptide does not have substantial HCC activity.

73. The method of claim 69, wherein the marker correlating with HCC activity comprises aldo-keto reductase gene expression, and wherein up-regulating or increasing aldo-keto reductase gene expression compared to FGF19 indicates that the peptide does not have substantial HCC activity.

74. The method of claim 69, wherein the marker indicative of HCC activity comprises Slc1a2 gene expression, and wherein down-regulating or decreasing Slc1a2 gene expression compared to FGF21 indicates that the peptide does not have substantial HCC activity.

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<110> NGM Biopharmaceuticals, Inc.
LING, LEI
LINDHOUT, DARRIN A.

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145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 5
<211> 191
<212> PRT
<213> Homo sapiens

<400> 5

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 6
<211> 187
<212> PRT
<213> Homo sapiens

<400> 6

Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1 5 10 15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
20 25 30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
35 40 45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
50 55 60

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu
85 90 95

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
165 170 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 7
<211> 192
<212> PRT
<213> Homo sapiens

<400> 7

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly

1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 8
<211> 191
<212> PRT
<213> Homo sapiens

<400> 8

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly

35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 9
<211> 193
<212> PRT
<213> Homo sapiens

<400> 9

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met

65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 10
<211> 193
<212> PRT
<213> Homo sapiens

<400> 10

Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp

85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 11
<211> 192
<212> PRT
<213> Homo sapiens

<400> 11

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser

100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 12
<211> 194
<212> PRT
<213> Homo sapiens

<400> 12

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu

130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 13
<211> 192
<212> PRT
<213> Homo sapiens

<400> 13

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu

145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 14
<211> 191
<212> PRT
<213> Homo sapiens

<400> 14

Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys

180 185 190

<210> 15
<211> 192
<212> PRT
<213> Homo sapiens

<400> 15

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 16
<211> 192
<212> PRT
<213> Homo sapiens

<400> 16

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 17
<211> 192
<212> PRT
<213> Homo sapiens

<400> 17

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

```
Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 18
<211> 192
<212> PRT
<213> Homo sapiens

<400> 18

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Tyr Gly Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60
```

```
Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 19
<211> 192
<212> PRT
<213> Homo sapiens

<400> 19

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val Tyr Gly Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95
```

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 20
<211> 192
<212> PRT
<213> Homo sapiens

<400> 20

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 21
<211> 192
<212> PRT
<213> Homo sapiens

<400> 21

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

```
Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 22
<211> 193
<212> PRT
<213> Homo sapiens

<400> 22

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Gly Trp Gly
1               5                   10                  15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
            20                  25                  30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
        35                  40                  45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
    50                  55                  60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65                  70                  75                  80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
                85                  90                  95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
            100                 105                 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
        115                 120                 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
    130                 135                 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145                 150                 155                 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
                165                 170                 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
            180                 185                 190
```

Lys

<210> 23
<211> 192
<212> PRT
<213> Homo sapiens

<400> 23

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Gly Trp Gly Asp
1               5                  10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 24
<211> 192

<212> PRT
<213> Homo sapiens

<400> 24

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 25
<211> 192
<212> PRT
<213> Homo sapiens

<400> 25

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Tyr Trp Gly Asp
1 5 10 15

```
Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 26
<211> 192
<212> PRT
<213> Homo sapiens

<400> 26

```
Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45
```

```
Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
 50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 27
<211> 192
<212> PRT
<213> Homo sapiens

<400> 27

```
Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro His Val His Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80
```

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 28
<211> 191
<212> PRT
<213> Homo sapiens

<400> 28

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Trp Gly Asp Pro
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 29
<211> 193
<212> PRT
<213> Homo sapiens

<400> 29

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

```
Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145                 150                 155                 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
                165                 170                 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
            180                 185                 190

Lys
```

<210> 30
<211> 194
<212> PRT
<213> Homo sapiens

<400> 30

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Ala Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85                  90                  95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160
```

```
Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 31
<211> 191
<212> PRT
<213> Homo sapiens

<400> 31

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Ala Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175
```

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

<210> 32
<211> 191
<212> PRT
<213> Homo sapiens

<400> 32

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 33
<211> 191
<212> PRT

<213> Homo sapiens

<400> 33

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Pro Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 34
<211> 191
<212> PRT
<213> Homo sapiens

<400> 34

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Ala
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 35
<211> 191
<212> PRT
<213> Homo sapiens

<400> 35

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Glu
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 36
<211> 191
<212> PRT
<213> Homo sapiens

<400> 36

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 37
<211> 191
<212> PRT
<213> Homo sapiens

<400> 37

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ala Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 38
<211> 191
<212> PRT
<213> Homo sapiens

<400> 38

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 39
<211> 191
<212> PRT
<213> Homo sapiens

<400> 39

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Thr Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 40
<211> 193
<212> PRT
<213> Homo sapiens

<400> 40

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Gln Pro Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 41
<211> 182
<212> PRT
<213> Homo sapiens

<400> 41

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp
145 150 155 160

Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg
165 170 175

Ser Pro Ser Tyr Ala Ser
180

<210> 42
<211> 178
<212> PRT
<213> Homo sapiens

<400> 42

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val

1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val Gly Ser Ser
145 150 155 160

Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser Pro Ser Tyr
165 170 175

Ala Ser

<210> 43
<211> 192
<212> PRT
<213> Homo sapiens

<400> 43

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Gly
1 5 10 15

Asp Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg

35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 44
<211> 185
<212> PRT
<213> Homo sapiens

<400> 44

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln
20 25 30

Thr Glu Ala His Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala
35 40 45

Ala Asp Gln Ser Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro
50 55 60

Gly Val Ile Gln Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln

65 70 75 80

Arg Pro Asp Gly Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala
85 90 95

Cys Ser Phe Arg Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln
100 105 110

Ser Glu Ala His Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro
115 120 125

His Arg Asp Pro Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro
130 135 140

Gly Leu Pro Pro Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln
145 150 155 160

Pro Pro Asp Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser
165 170 175

Gln Gly Arg Ser Pro Ser Tyr Ala Ser
180 185

<210> 45
<211> 193
<212> PRT
<213> Homo sapiens

<400> 45

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

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

Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly
65 70 75 80

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His

100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
130 135 140

Ala Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 46
<211> 232
<212> PRT
<213> Homo sapiens

<400> 46

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln
20 25 30

Thr Glu Ala His Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala
35 40 45

Ala Asp Gln Ser Pro Glu Ser Leu Leu Gln Leu Lys Ala Leu Lys Pro
50 55 60

Gly Val Ile Gln Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln
65 70 75 80

Arg Pro Asp Gly Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala
85 90 95

Cys Ser Phe Arg Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln
100 105 110

Ser Glu Ala His Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro

115 120 125

His Arg Asp Pro Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro
130 135 140

Gly Leu Pro Pro Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln
145 150 155 160

Pro Pro Asp Val Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser
165 170 175

Gln Gly Arg Ser Pro Ser Tyr Ala Ser Pro Met Val Pro Glu Glu Pro
180 185 190

Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
195 200 205

Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
210 215 220

Val Arg Ser Pro Ser Phe Glu Lys
225 230

<210> 47
<211> 190
<212> PRT
<213> Homo sapiens

<400> 47

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys

100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

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

<210> 48
<211> 187
<212> PRT
<213> Homo sapiens

<400> 48

Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1 5 10 15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
20 25 30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
35 40 45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
50 55 60

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu
85 90 95

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro

130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
165 170 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 49
<211> 192
<212> PRT
<213> Homo sapiens

<400> 49

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe

165 170 175

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

<210> 50
<211> 191
<212> PRT
<213> Homo sapiens

<400> 50

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Leu Glu Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 51

<211> 191
<212> PRT
<213> Homo sapiens

<400> 51

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 52
<211> 187
<212> PRT
<213> Homo sapiens

<400> 52

Arg Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile Arg Leu Arg
1 5 10 15

```
His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20                  25                  30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35                  40                  45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
    50                  55                  60

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65                  70                  75                  80

Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu
                85                  90                  95

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
            100                 105                 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
        115                 120                 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
    130                 135                 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145                 150                 155                 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
                165                 170                 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185
```

<210> 53
<211> 189
<212> PRT
<213> Homo sapiens

<400> 53

```
Met Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1               5                   10                  15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
            20                  25                  30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
        35                  40                  45
```

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala
50 55 60

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val
165 170 175

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 54
<211> 192
<212> PRT
<213> Homo sapiens

<400> 54

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 55
<211> 192
<212> PRT
<213> Homo sapiens

<400> 55

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Tyr Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 56
<211> 192
<212> PRT
<213> Homo sapiens

<400> 56

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val Tyr Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 57
<211> 192
<212> PRT
<213> Homo sapiens

<400> 57

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 58
<211> 192
<212> PRT
<213> Homo sapiens

<400> 58

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Val His Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 59
<211> 192

<212> PRT
<213> Homo sapiens

<400> 59

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 60
<211> 192
<212> PRT
<213> Homo sapiens

<400> 60

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His His Tyr Trp Gly Asp
1 5 10 15

```
Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 61
<211> 192
<212> PRT
<213> Homo sapiens

<400> 61

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Gly Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45
```

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 62
<211> 192
<212> PRT
<213> Homo sapiens

<400> 62

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Tyr Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 63
<211> 192
<212> PRT
<213> Homo sapiens

<400> 63

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

```
Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 64
<211> 192
<212> PRT
<213> Homo sapiens

<400> 64

```
Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140
```

```
Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 65
<211> 192
<212> PRT
<213> Homo sapiens

<400> 65

```
Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro His Val His Trp Gly Asp
1               5                   10                  15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175
```

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

<210> 66
<211> 192
<212> PRT
<213> Homo sapiens

<400> 66

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Leu Gln Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 67
<211> 191
<212> PRT

<213> Homo sapiens

<400> 67

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val Trp Gly Asp Pro
1               5                   10                  15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 68
<211> 193
<212> PRT
<213> Homo sapiens

<400> 68

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Trp Gly
1               5                   10                  15
```

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 69
<211> 189
<212> PRT
<213> Homo sapiens

<400> 69

Arg Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1 5 10 15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
20 25 30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
35 40 45

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala
50 55 60

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val
165 170 175

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 70
<211> 190
<212> PRT
<213> Homo sapiens

<400> 70

Met Arg Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

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

<210> 71
<211> 181
<212> PRT
<213> Homo sapiens

<400> 71

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

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

Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly
65 70 75 80

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Ser Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
130 135 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145 150 155 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
165 170 175

Pro Ser Tyr Ala Ser
180

<210> 72
<211> 181
<212> PRT
<213> Homo sapiens

<400> 72

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
20 25 30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
35 40 45

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

Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly
65 70 75 80

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

```
Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
    130                 135                 140

Ala Pro Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145                 150                 155                 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
                165                 170                 175

Pro Ser Tyr Ala Ser
            180
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<210> 73
<211> 212
<212> PRT
<213> Homo sapiens

<400> 73

```
His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1               5                   10                  15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
            20                  25                  30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
        35                  40                  45

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

Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly
65                  70                  75                  80

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
                85                  90                  95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
            100                 105                 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
        115                 120                 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
    130                 135                 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145                 150                 155                 160
```

Gly Ser Ser Asp Pro Leu Ser Met Val Val Gln Asp Glu Leu Gln Gly
165 170 175

Val Gly Gly Glu Gly Cys His Met His Pro Glu Asn Cys Lys Thr Leu
180 185 190

Leu Thr Asp Ile Asp Arg Thr His Thr Glu Lys Pro Val Trp Asp Gly
195 200 205

Ile Thr Gly Glu
210

<210> 74
<211> 189
<212> PRT
<213> Homo sapiens

<400> 74

Arg Asp Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg
1 5 10 15

Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe
20 25 30

Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser
35 40 45

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala
50 55 60

Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly
65 70 75 80

Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu
85 90 95

Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His
100 105 110

Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys
115 120 125

Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met
130 135 140

Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met
145 150 155 160

Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val
165 170 175

Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 75
<211> 184
<212> PRT
<213> Homo sapiens

<400> 75

Arg Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr
1 5 10 15

Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala
20 25 30

Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu
35 40 45

Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His
50 55 60

Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu
65 70 75 80

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

Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser
100 105 110

Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu
115 120 125

Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro
130 135 140

Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
145 150 155 160

Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
165 170 175

Val Arg Ser Pro Ser Phe Glu Lys
180

<210> 76
<211> 179
<212> PRT
<213> Homo sapiens

<400> 76

Arg Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His
1 5 10 15

Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp
20 25 30

Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val
35 40 45

Ala Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu
50 55 60

Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu
65 70 75 80

Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val
85 90 95

Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys
100 105 110

Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
115 120 125

Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly
130 135 140

His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met
145 150 155 160

Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser
165 170 175

Phe Glu Lys

<210> 77
<211> 175
<212> PRT
<213> Homo sapiens

<400> 77

Arg Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser

1 5 10 15

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
20 25 30

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
35 40 45

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
50 55 60

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
65 70 75 80

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
85 90 95

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
100 105 110

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
115 120 125

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
130 135 140

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
145 150 155 160

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
165 170 175

<210> 78
<211> 188
<212> PRT
<213> Homo sapiens

<400> 78

Arg Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1 5 10 15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
20 25 30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
35 40 45

His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile

50 55 60

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65 70 75 80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
85 90 95

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn
115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr
165 170 175

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 79
<211> 187
<212> PRT
<213> Homo sapiens

<400> 79

Arg Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg
1 5 10 15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
20 25 30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
35 40 45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
50 55 60

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu

85 90 95

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
165 170 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 80
<211> 186
<212> PRT
<213> Homo sapiens

<400> 80

Arg Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly
50 55 60

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
100 105 110

Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly

115 120 125

Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
130 135 140

Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145 150 155 160

Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu
165 170 175

Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 81
<211> 185
<212> PRT
<213> Homo sapiens

<400> 81

Arg His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu
1 5 10 15

Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg
20 25 30

Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu
35 40 45

Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val
50 55 60

His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly
65 70 75 80

Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg
85 90 95

Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val
100 105 110

Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe
115 120 125

Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu
130 135 140

Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro

145 150 155 160

Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu
165 170 175

Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 82
<211> 194
<212> PRT
<213> Homo sapiens

<400> 82

Arg Pro Leu Ala Phe Ser Ala Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

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

180 185 190

Glu Lys

<210> 83
<211> 194
<212> PRT
<213> Homo sapiens

<400> 83

Arg Pro Leu Ala Phe Ser Asp Ala Ala Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 84
<211> 194
<212> PRT
<213> Homo sapiens

<400> 84

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Ala His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85                  90                  95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
        115                 120                 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 85

<211> 194
<212> PRT
<213> Homo sapiens

<400> 85

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Ala
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 86
<211> 194
<212> PRT
<213> Homo sapiens

<400> 86

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Ala Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 87
<211> 167
<212> PRT
<213> Homo sapiens

<400> 87

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Ala Ile Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu
20 25 30

Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His Ser
35 40 45

Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu
50 55 60

Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp
65 70 75 80

Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu
85 90 95

Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro
100 105 110

Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu
115 120 125

Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu
130 135 140

Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val
145 150 155 160

Arg Ser Pro Ser Phe Glu Lys
165

<210> 88
<211> 194
<212> PRT
<213> Homo sapiens

<400> 88

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro Ala Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 89
<211> 194
<212> PRT
<213> Homo sapiens

<400> 89

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro Ala Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 90
<211> 194
<212> PRT
<213> Homo sapiens

<400> 90

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

```
Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
            180                 185                 190

Glu Lys
```

<210> 91
<211> 194
<212> PRT
<213> Homo sapiens

<400> 91

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                   10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85                  90                  95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110
```

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 92
<211> 194
<212> PRT
<213> Homo sapiens

<400> 92

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 93
<211> 194
<212> PRT
<213> Homo sapiens

<400> 93

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 94
<211> 194
<212> PRT
<213> Homo sapiens

<400> 94

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 95
<211> 194
<212> PRT
<213> Homo sapiens

<400> 95

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 96
<211> 194
<212> PRT
<213> Homo sapiens

<400> 96

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 97
<211> 194
<212> PRT
<213> Homo sapiens

<400> 97

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Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1               5                  10                  15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
            20                  25                  30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
        35                  40                  45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
    50                  55                  60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65                  70                  75                  80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
                85                  90                  95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
            100                 105                 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
        115                 120                 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser Ala Phe Leu
    130                 135                 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145                 150                 155                 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
                165                 170                 175

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

<210> 98
<211> 194
<212> PRT
<213> Homo sapiens

<400> 98

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Ala Gln
115 120 125

Ala Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ala Ala Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 99
<211> 194

<212> PRT
<213> Homo sapiens

<400> 99

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 100
<211> 181
<212> PRT
<213> Homo sapiens

<400> 100

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His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1               5                  10                  15

Arg Gln Arg Tyr Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His
            20                  25                  30

Leu Glu Ile Arg Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser
        35                  40                  45

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

Ile Leu Gly Val Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly
65                  70                  75                  80

Ala Leu Tyr Gly Ser Leu His Phe Asp Pro Glu Ala Cys Ser Phe Arg
                85                  90                  95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
            100                 105                 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
        115                 120                 125

Ala Pro Arg Gly Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro
    130                 135                 140

Ala Leu Pro Glu Pro Pro Gly Ile Leu Ala Pro Gln Pro Pro Asp Val
145                 150                 155                 160

Gly Ser Ser Asp Pro Leu Ser Met Val Gly Pro Ser Gln Gly Arg Ser
                165                 170                 175

Pro Ser Tyr Ala Ser
            180
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<210> 101
<211> 4
<212> PRT
<213> Homo sapiens

<400> 101

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Val His Tyr Gly
1
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<210> 102
<211> 9
<212> PRT

<213> Homo sapiens

<400> 102

Asp Ala Ser Pro His Val His Tyr Gly
1 5

<210> 103
<211> 9
<212> PRT
<213> Homo sapiens

<400> 103

Asp Ser Ser Pro Leu Val His Tyr Gly
1 5

<210> 104
<211> 7
<212> PRT
<213> Homo sapiens

<400> 104

Asp Ser Ser Pro Leu Leu Gln
1 5

<210> 105
<211> 12
<212> PRT
<213> Homo sapiens

<400> 105

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10

<210> 106
<211> 5
<212> PRT
<213> Homo sapiens

<400> 106

Arg His Pro Ile Pro
1 5

<210> 107
<211> 4
<212> PRT
<213> Homo sapiens

<400> 107

His Pro Ile Pro
1

<210> 108
<211> 5
<212> PRT
<213> Homo sapiens

<400> 108

Arg Pro Leu Ala Phe
1 5

<210> 109
<211> 4
<212> PRT
<213> Homo sapiens

<400> 109

Pro Leu Ala Phe
1

<210> 110
<211> 6
<212> PRT
<213> Homo sapiens

<400> 110

Met Asp Ser Ser Pro Leu
1 5

<210> 111
<211> 7
<212> PRT
<213> Homo sapiens

<400> 111

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 112
<211> 6
<212> PRT
<213> Homo sapiens

<400> 112

Ser Asp Ser Ser Pro Leu
1 5

<210> 113
<211> 5
<212> PRT
<213> Homo sapiens

<400> 113

Met Ser Ser Pro Leu

1 5

<210> 114
<211> 4
<212> PRT
<213> Homo sapiens

<400> 114

Ser Ser Pro Leu
1

<210> 115
<211> 4
<212> PRT
<213> Homo sapiens

<400> 115

Arg Asp Ser Ser
1

<210> 116
<211> 4
<212> PRT
<213> Homo sapiens

<400> 116

Met Asp Ser Ser
1

<210> 117
<211> 5
<212> PRT
<213> Homo sapiens

<400> 117

Met Arg Asp Ser Ser
1 5

<210> 118
<211> 5
<212> PRT
<213> Homo sapiens

<400> 118

Met Ser Ser Pro Leu
1 5

<210> 119
<211> 6
<212> PRT
<213> Homo sapiens

<400> 119

Met Asp Ser Ser Pro Leu
1 5

<210> 120
<211> 7
<212> PRT
<213> Homo sapiens

<400> 120

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 121
<211> 5
<212> PRT
<213> Homo sapiens

<400> 121

Asp Ser Ser Pro Leu
1 5

<210> 122
<211> 5
<212> PRT
<213> Homo sapiens

<400> 122

Asp Ala Ser Pro His
1 5

<210> 123
<211> 4
<212> PRT
<213> Homo sapiens

<400> 123

Arg Asp Ser Ser
1

<210> 124
<211> 4
<212> PRT
<213> Homo sapiens

<400> 124

Met Asp Ser Ser
1

<210> 125
<211> 5

<212> PRT
<213> Homo sapiens

<400> 125

Met Arg Asp Ser Ser
1 5

<210> 126
<211> 6
<212> PRT
<213> Homo sapiens

<400> 126

Met Asp Ser Ser Pro Leu
1 5

<210> 127
<211> 7
<212> PRT
<213> Homo sapiens

<400> 127

Met Ser Asp Ser Ser Pro Leu
1 5

<210> 128
<211> 5
<212> PRT
<213> Homo sapiens

<400> 128

Met Ser Ser Pro Leu
1 5

<210> 129
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 129

Gly Ser Gly Gly Ser
1 5

<210> 130
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 130

Gly Gly Gly Ser
1

<210> 131
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 131

Gly Gly Ser Gly
1

<210> 132
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 132

Gly Gly Ser Gly Gly
1 5

<210> 133
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 133

Gly Ser Gly Ser Gly
1 5

<210> 134
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 134

Gly Ser Gly Gly Gly
1 5

<210> 135
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Linker sequence

<400> 135

Gly Ser Ser Ser Gly
1 5

<210> 136
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Forward primer

<400> 136
ccgactagtc accatgcgga gcgggtgtgt gg 32

<210> 137
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Reverse primer

<400> 137
ataagaatgc ggccgcttac ttctcaaagc tgggactcct c 41

<210> 138
<211> 186
<212> PRT
<213> Homo sapiens

<400> 138

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly
50 55 60

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
100 105 110

Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly
115 120 125

Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
130 135 140

Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145 150 155 160

Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu
165 170 175

Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 139
<211> 194
<212> PRT
<213> Homo sapiens

<400> 139

Arg Pro Leu Ala Phe Ser Asp Ala Ser Pro His Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 140
<211> 194
<212> PRT
<213> Homo sapiens

<400> 140

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Val His Tyr Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 141
<211> 188
<212> PRT
<213> Homo sapiens

<400> 141

Asp Ser Ser Pro Leu Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1 5 10 15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
20 25 30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
35 40 45

His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile
50 55 60

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65 70 75 80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
85 90 95

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn
115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr
165 170 175

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 142
<211> 193
<212> PRT
<213> Homo sapiens

<400> 142

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 143
<211> 191
<212> PRT
<213> Homo sapiens

<400> 143

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 144
<211> 194
<212> PRT
<213> Homo sapiens

<400> 144

Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Trp
1 5 10 15

Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly
20 25 30

Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys
35 40 45

Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala
50 55 60

Leu Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys
65 70 75 80

Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu
85 90 95

Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr
100 105 110

Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
115 120 125

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu
130 135 140

Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His
145 150 155 160

Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp
165 170 175

Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe
180 185 190

Glu Lys

<210> 145
<211> 193

<212> PRT
<213> Homo sapiens

<400> 145

Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly
1 5 10 15

Asp Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 146
<211> 192
<212> PRT
<213> Homo sapiens

<400> 146

```
Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro Leu Leu Gln Phe Gly Gly
1               5                  10                  15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
            20                  25                  30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
        35                  40                  45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
    50                  55                  60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65                  70                  75                  80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
                85                  90                  95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
            100                 105                 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
        115                 120                 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
    130                 135                 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145                 150                 155                 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
                165                 170                 175

Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
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<210> 147
<211> 191
<212> PRT
<213> Homo sapiens

<400> 147

```
Arg His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln
1               5                  10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30
```

```
Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 148
<211> 187
<212> PRT
<213> Homo sapiens

<400> 148

```
Arg Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg
1               5                   10                  15

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg
            20                  25                  30

Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His
        35                  40                  45

Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys
    50                  55                  60
```

Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met
65 70 75 80

Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu
85 90 95

Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu
100 105 110

Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg
115 120 125

Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro
130 135 140

Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser
145 150 155 160

Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly
165 170 175

Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 149
<211> 192
<212> PRT
<213> Homo sapiens

<400> 149

Arg Pro Leu Ala Phe Ser Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly
1 5 10 15

Gln Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 150
<211> 191
<212> PRT
<213> Homo sapiens

<400> 150

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Ala Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 151
<211> 191
<212> PRT
<213> Homo sapiens

<400> 151

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Asp Gln
1 5 10 15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

```
Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 152
<211> 191
<212> PRT
<213> Homo sapiens

<400> 152

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Pro Gln
1               5                   10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 153
<211> 191
<212> PRT
<213> Homo sapiens

<400> 153

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Ala
1               5                  10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 154
<211> 191
<212> PRT
<213> Homo sapiens

<400> 154

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Glu
1               5                  10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
        35                  40                  45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
    50                  55                  60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65                  70                  75                  80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
                85                  90                  95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
            100                 105                 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
        115                 120                 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
    130                 135                 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145                 150                 155                 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
                165                 170                 175

Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
            180                 185                 190
```

<210> 155
<211> 191
<212> PRT
<213> Homo sapiens

<400> 155

```
Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Asn
1               5                  10                  15

Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
            20                  25                  30
```

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 156
<211> 191
<212> PRT
<213> Homo sapiens

<400> 156

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ala Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 157
<211> 191
<212> PRT
<213> Homo sapiens

<400> 157

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 158
<211> 191
<212> PRT
<213> Homo sapiens

<400> 158

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln
1 5 10 15

Thr Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser
20 25 30

Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly
35 40 45

Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr
50 55 60

Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala
65 70 75 80

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala
85 90 95

Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu
100 105 110

Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu
115 120 125

Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu
130 135 140

Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser
145 150 155 160

Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly
165 170 175

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

<210> 159
<211> 193
<212> PRT
<213> Homo sapiens

<400> 159

Arg His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly
1 5 10 15

Gln Pro Val Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu
20 25 30

Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala
35 40 45

Arg Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu
50 55 60

Arg Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met
65 70 75 80

Gly Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp
85 90 95

Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg
100 105 110

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg
115 120 125

Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro
130 135 140

Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu
145 150 155 160

Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro
165 170 175

Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu
180 185 190

Lys

<210> 160
<211> 190
<212> PRT
<213> Homo sapiens

<400> 160

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

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

<210> 161
<211> 186
<212> PRT
<213> Homo sapiens

<400> 161

Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Leu Arg His
1 5 10 15

Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile
20 25 30

Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser
35 40 45

Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly
50 55 60

Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln
65 70 75 80

Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile
85 90 95

Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro
100 105 110

Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly
115 120 125

Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu
130 135 140

Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser
145 150 155 160

Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu
165 170 175

Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 162
<211> 190
<212> PRT
<213> Homo sapiens

<400> 162

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Trp Gly Asp Pro Ile
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

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

<210> 163
<211> 192
<212> PRT
<213> Homo sapiens

<400> 163

His Pro Ile Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser

20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg
50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 164
<211> 192
<212> PRT
<213> Homo sapiens

<400> 164

His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Trp Gly Asp
1 5 10 15

Pro Ile Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser
20 25 30

Ser Cys Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg
35 40 45

Gly Gln Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg

50 55 60

Thr Val Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly
65 70 75 80

Ala Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
85 90 95

Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser
100 105 110

Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln
115 120 125

Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met
130 135 140

Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu
145 150 155 160

Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe
165 170 175

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

<210> 165
<211> 190
<212> PRT
<213> Homo sapiens

<400> 165

His Pro Ile Pro Asp Ser Ser Pro His Val His Tyr Gly Gly Gln Val
1 5 10 15

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
20 25 30

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
35 40 45

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
50 55 60

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
65 70 75 80

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe

85 90 95

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
100 105 110

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
115 120 125

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
130 135 140

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
145 150 155 160

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
165 170 175

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

<210> 166
<211> 188
<212> PRT
<213> Homo sapiens

<400> 166

Asp Ala Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu
1 5 10 15

Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu
20 25 30

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala
35 40 45

His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile
50 55 60

Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys
65 70 75 80

Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu
85 90 95

Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg
100 105 110

Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn

115 120 125

Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val
130 135 140

Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe
145 150 155 160

Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr
165 170 175

Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
180 185

<210> 167
<211> 183
<212> PRT
<213> Homo sapiens

<400> 167

Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr Thr
1 5 10 15

Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala Asp
20 25 30

Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu Glu
35 40 45

Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His Ser
50 55 60

Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu Leu
65 70 75 80

Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro Asp
85 90 95

Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser Leu
100 105 110

Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro
115 120 125

Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu
130 135 140

Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu

145 150 155 160

Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val
165 170 175

Arg Ser Pro Ser Phe Glu Lys
180

<210> 168
<211> 174
<212> PRT
<213> Homo sapiens

<400> 168

Arg Leu Arg His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys
1 5 10 15

Phe Leu Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln
20 25 30

Ser Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val
35 40 45

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala Asp
50 55 60

Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe
65 70 75 80

Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys
85 90 95

His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr
100 105 110

Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe Leu Pro Met Leu Pro
115 120 125

Met Val Pro Glu Glu Pro Glu Asp Leu Arg Gly His Leu Glu Ser Asp
130 135 140

Met Phe Ser Ser Pro Leu Glu Thr Asp Ser Met Asp Pro Phe Gly Leu
145 150 155 160

Val Thr Gly Leu Glu Ala Val Arg Ser Pro Ser Phe Glu Lys
165 170