SEQUENCE LISTING

<110> DiMarchi, et al.

<120> Amida Based Glucagon and Related Peptide Prodrugs

<130> x

<140> 13130962
<141> 2011-05-24

<160> 1921

<170> PatentIn version 3.5

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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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<222> (29)..(29)
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Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
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<400> 27

Lys Arg Asn Arg Asn Asn Ile Ala
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Lys Arg Asn Arg
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Xaa Thr
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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Xaa Thr
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<222> (29)..(29)
<223> Thr, Gly or an acidic amino acid

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Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Xaa Xaa
20 25

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<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Lys

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Gln or Glu

<400> 46

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 47
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<400> 47

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 48
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<400> 48

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Glu Trp Leu Met Asn Thr
20 25

<210> 49
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<400> 49

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Glu Trp Leu Met Lys Thr
20 25

<210> 50
<211> 31
<212> PRT
<213> Homo sapiens

<400> 50

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 51
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln, Lys, Arg, Orn, or Citrulline

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Asp, Glu, homoglutamic acid, or homocysteic acid

<220>
<221> MOD_RES
<222> (24)..(24)

<223> Gln or Glu

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or an acidic amino acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly or an acidic amino acid

<400> 51

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Val Xaa Trp Leu Met Xaa Xaa
20 25

<210> 52
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 52

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 53
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Glu, Orn or Nle

<220>
<221> MOD_RES

<222> (15)..(15)
<223> Asp, Glu, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Lys

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Gln or Glu

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or an acidic amino acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr or an acidic amino acid

<400> 53

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Xaa Xaa
20 25

<210> 54
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Arg or Gln

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Arg or Ala

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Asp or Glu

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Gln or Ala

<400> 54

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Xaa Xaa Ala Lys Xaa Phe Xaa Xaa Trp Leu Met Asn Thr
20 25

<210> 55
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His or alpha, alpha-dimethyl imidiazole acetic acid (DMIA), N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, aminoisobutyric acid (AIB) or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Tyr or Trp

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Lys, Citrulline, Orn or Arg

<220>
<221> MOD_RES
<222> (15)..(15)

<223> Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Arg, Gln, Lys, Cys, Orn, homocysteine or acetyl phenylalanine

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Arg, Ala, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln, Lys, Arg, Orn or Citrulline

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Lys, Cys, Orn, homocystein or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln, Glu, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Arg, Citrulline, Orn, Lys or Asp

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocycsteine or acetyl phenyalanine

<400> 55

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Xaa Ser Xaa Tyr Leu Xaa Xaa
1 5 10 15

Xaa Xaa Ala Xaa Xaa Phe Xaa Xaa Trp Leu Xaa Xaa Xaa
20 25

<210> 56
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, AIB or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln, Lys, Arg, Orn or Citrulline

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Cys, Orn, homocycstein or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln, Glu, Cys, Orn, homocycsteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or Asp

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocycsteine or acetyl phenyalanine

<400> 56

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Xaa Xaa Trp Leu Xaa Xaa Xaa
20 25

<210> 57
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl- His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, AIB or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side changes at position 12 and 16

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln, Lys, Arg, Orn or Citrulline

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Cys, Orn, homocycsteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln, Glu, Lys, Cys, Orn, homocysteine or acetyl Phe

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or Asp

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<400> 57

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Glu
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Xaa Xaa Trp Leu Xaa Xaa Xaa
20 25

<210> 58
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, AIB or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln, Glu, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or Asp

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<400> 58

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Glu
1 5 10 15

Arg Arg Ala Lys Xaa Phe Xaa Xaa Trp Leu Xaa Xaa Xaa
20 25

<210> 59
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, AIB, or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (20)..(24)
<223> Lactam ring between side chains at position 20 and 24

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or Asp

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocysteine or acetyl pheylalanine

<400> 59

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Lys Xaa Phe Xaa Glu Trp Leu Xaa Xaa Xaa
20 25

<210> 60
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, D-Ala, Val, Gly, N-methyl Ser, AIB or N-methyl Ala

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Gln, Glu, Orn or Nle

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln, Lys, Arg, Orn, or Citrulline

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Gln, Glu, Asp, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (23)..(23)
<223> Val or Ile

<220>
<221> MISC_FEATURE
<222> (24)..(28)
<223> Lactam ring between side chains at position 24 and 28

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr, Gly, Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<400> 60

Xaa Xaa Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Xaa Glu Trp Leu Xaa Lys Xaa
20 25

<210> 61
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MISC_FEATURE
<223> positions 30 to 40 are present only if position 29 is Gly; see specification as filed for detailed description of substitutions and preferred embodiments

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, Val, Gly, N-methyl Ser, Aib, N-methyl, Ala or D-Ala

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Ala or Arg

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln or Cys-PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr-CONH2, Cys-PEG, or Gly

<220>
<221> MOD_RES
<222> (40)..(40)
<223> Cys-PEG or not present

<400> 61

Xaa Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Xaa Ala Lys Asp Phe Val Xaa Trp Leu Met Asn Xaa Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 62
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MISC_FEATURE
<223> positions 30 to 40 are present only if position 29 is Gly; see specification as filed for detailed description of substitutions and preferred embodiments

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, D-His, (Des-amino)His, hydroxyl-His, acetyl-His, homo-His, DMIA, N-methyl His, alpha-methyl His, or imidazole acetic acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Ser, D-Ser, Ala, Val, Gly, N-methyl Ser, AIB0, N-methyl Ala, or D-Ala

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Ala or Arg

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ala, Gln or Cys-PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr-CONH2, Cys-PEG, or Gly

<220>
<221> MOD_RES
<222> (40)..(40)
<223> Cys-PEG or not present

<400> 62

Xaa Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Xaa Ala Lys Glu Phe Ile Xaa Trp Leu Met Asn Xaa Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 63
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Lys

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Asp, Lys, Cys, Orn, homocysteine or acetyl phealanine

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Gln, Lys, Cys, Orn, homocysteine or acetyl phealanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met, Leu or Nle

<400> 63

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Val Xaa Trp Leu Xaa Asn Thr
20 25

<210> 64
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Asp, Glu, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Lys

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Gln or Glu

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asn, Lys or Asp

<400> 64

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Xaa Gly Gly Pro Ser
20 25 30

Ser Gly Pro Pro Pro Ser
35

<210> 65
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide fragment representing the carboxy terminal 10 amino acids of Exdendin-4

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Cys-PEG

<400> 65

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Cys
1 5 10

<210> 66
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asp or Asn

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr or Gly

<400> 66

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Xaa Xaa
20 25

<210> 67
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MISC_FEATURE

<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asp or Asn

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr or Gly

<400> 67

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Xaa Xaa
20 25

<210> 68
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Glucagon Analogue

<220>
<221> MISC_FEATURE
<222> (20)..(24)
<223> Lactam ring between side chains at positions 20 and 24

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Asp or Asn

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr or Gly

<400> 68

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Glu Trp Leu Met Xaa Xaa
20 25

<210> 69
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> glucagon analogue

<220>
<221> MISC_FEATURE
<222> (24)..(28)
<223> Lactam ring between side chains at positions 24 and 28

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Thr or Gly

<400> 69

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Glu Trp Leu Met Lys Xaa
20 25

<210> 70
<211> 29
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
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<400> 70

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 71
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 71

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 72
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 72

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 73
<211> 29
<212> PRT
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<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 73

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 74
<211> 29
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 74

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 75
<211> 29
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 75

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 76
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 76

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 77
<211> 29
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<220>
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<223> Lactam ring between side chains at positions 16 and 20

<400> 77

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 78
<211> 29
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<220>
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<223> Lactam ring between side chains at positions 12 and 16

<400> 78

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 79
<211> 29
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<400> 79

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 80
<211> 29
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<220>
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<222> (16)..(20)
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<400> 80

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 81
<211> 29
<212> PRT
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<220>
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<400> 81

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
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<210> 82
<211> 29
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<220>
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<400> 82

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr

20 25

<210> 83
<211> 29
<212> PRT
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 83

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 84
<211> 29
<212> PRT
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<220>
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<220>
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<223> c-term amidation

<400> 84

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 85
<211> 29
<212> PRT
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<220>
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<223> Lactam ring between side chains at positions 12 and 16

<400> 85

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 86
<211> 29
<212> PRT
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<223> Lactam ring between side chains at positions 16 and 20

<400> 86

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 87
<211> 29
<212> PRT
<213> Artificial Sequence

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<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 87

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 88
<211> 29
<212> PRT
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<220>
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<223> (Des-amino)His

<400> 88

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 89
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<220>
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<400> 89

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 90
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<400> 90

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 91
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<400> 91

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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 92
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<400> 92

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 93
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<400> 93

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 94

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 95
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<400> 95

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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 96
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<400> 96

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 97

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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 97

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 98
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<220>
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<400> 98

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 99
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<400> 99

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

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<222> (16)..(20)
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<400> 100

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 102
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<400> 102

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

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<400> 103

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 104
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (29)..(29)
<223> c-term amidation

<400> 104

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 105
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<400> 105

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 106
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<400> 106

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 107

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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 108
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<223> Aminoisebutyric acid

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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 108

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 109
<211> 29
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<220>
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<223> Lactam ring between side chains at positions 16 and 20

<400> 109

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 110
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<400> 110

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 111

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 112
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<223> Aminoisobutryic acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 112

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1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 113
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<220>
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<220>
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<223> Lactam ring between side chains at positions 12 and 16

<400> 113

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 114
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<212> PRT

<213> Artificial Sequence

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<220>
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<220>
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 114

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 115
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<220>
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<222> (2)..(2)
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<400> 115

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

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<223> Aminoisobutryic acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 116

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 117
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<223> Aminoisobutryic acid

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 117

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 118
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<223> Aminoisobutyric acid

<400> 118

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 119
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<220>
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<223> Lactam ring between side chains at positions 12 and 16

<400> 119

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 120
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<223> Aminoisobutyric acid

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 120

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 121
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<220>
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<223> D-Ala

<400> 121

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 122
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<400> 122

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<223> Lactam ring between side chains at positions 16 and 20

<400> 123

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 124
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<223> Lactam ring between side chains at positions 12 and 16

<400> 124

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 125
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<223> Lactam ring between side chains at positions 12 and 16

<400> 125

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 126
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 126

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 127
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<220>
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<222> (2)..(2)
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<400> 127

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 128
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<223> Lactam ring between side chains at positions 16 and 20

<400> 128

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<223> Lactam ring between side chains at positions 12 and 16

<400> 129

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 130

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 131

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 132
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<400> 132

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 133
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<400> 133

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 134
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<400> 134

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 135
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<400> 135

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 136
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<400> 136

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
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<400> 137

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
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<210> 138
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<220>
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<220>
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<223> c-term amidation

<400> 138

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 139
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<223> c-term amidation

<400> 139

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 140
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<223> Lactam ring between side chains at positions 16 and 20

<400> 140

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 141
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<223> Lactam ring between side chains at positions 12 and 16

<400> 141

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 142
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<400> 142

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 143
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 143

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 144
<211> 29
<212> PRT

<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation

<400> 144

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 145
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 145

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 146
<211> 29
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<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 146

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 147
<211> 29
<212> PRT
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<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 147

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 148
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 148

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 149
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> glucagon analog

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 149

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 150
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<212> PRT
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 150

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 151
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 151

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 152
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> glucagon analog

<220>
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<223> c-term amidation

<400> 152

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 153
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<212> PRT
<213> Artificial Sequence

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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 153

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 154
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 154

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 155
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<212> PRT
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<220>
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<223> c-term amidation

<220>
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<222> (1)..(1)
<223> (Des-amino)His

<400> 155

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 156
<211> 29
<212> PRT
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<220>
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<223> c-term amidation

<220>
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<222> (1)..(1)
<223> (Des-amino)His

<400> 156

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 157
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<222> (1)..(1)
<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 157

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 158
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<212> PRT
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<220>
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<223> (Des-amino)His

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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 158

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<223> (Des-amino)His

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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 159

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 160
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<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 160

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 161
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<212> PRT
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<220>
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<223> (Des-amino)His

<400> 161

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 162
<211> 29
<212> PRT
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
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20 25

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20 25

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<400> 199

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1 5 10 15

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20 25

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<400> 203

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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

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<400> 204

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

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Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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20 25

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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<400> 228

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
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Arg Arg Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 229
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Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 230
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Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<210> 231
<211> 29
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and 16

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Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<400> 233

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1 5 10 15

Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 236
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<222> (24)..(24)
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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<400> 237

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 238
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<400> 238

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 239
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<220>
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<222> (24)..(24)
<223> Cys-PEG

<400> 239

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 240
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<220>
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<223> c-term amidation

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<223> Aminoisobutyric acid

<220>
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<222> (24)..(24)
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<400> 240

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 241
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<400> 241

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 242
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<222> (24)..(24)
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<400> 242

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 243
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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 244
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<222> (24)..(24)
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<400> 244

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 245
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<400> 245

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1 5 10 15

Arg Arg Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<211> 29
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<220>
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<222> (24)..(24)
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<400> 246

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<223> Lactam ring between side chains at positions 16 and 20

<220>
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<222> (24)..(24)
<223> Cys-PEG

<400> 247

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 248

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 249
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<220>
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<400> 249

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<400> 250

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1 5 10 15

Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 251
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<400> 251

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<223> Xaa can be any naturally occurring amino acid

<400> 252

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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<400> 254

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<210> 255
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<220>
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<210> 256
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<222> (24)..(24)
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<400> 256

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<210> 257
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<400> 257

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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<222> (24)..(24)
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<400> 258

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<222> (24)..(24)
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<400> 261

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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 262

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1 5 10 15

Arg Arg Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 263
<211> 29
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<400> 263

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 265

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1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr

20 25

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<222> (24)..(24)
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<400> 267

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1 5 10 15

Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<222> (24)..(24)
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<400> 268

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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<400> 269

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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<223> D-Ala

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<222> (24)..(24)
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<400> 271

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 272
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<400> 272

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 274
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<400> 274

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1 5 10 15

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20 25

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<400> 275

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 276
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<400> 276

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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 277

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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<220>
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<400> 278

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<220>
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<222> (24)..(24)
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<400> 279

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1 5 10 15

Arg Arg Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 280
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<222> (24)..(24)
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<400> 280

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 281
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<400> 281

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<222> (24)..(24)
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<400> 282

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1 5 10 15

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20 25

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1 5 10 15

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20 25

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<220>
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<400> 284

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 285
<211> 29
<212> PRT

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<400> 318

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1 5 10 15

Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

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<223> Cys-PEG

<400> 323

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<223> Lactam ring between side chains at position 16 and 20

<220>
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<222> (24)..(24)
<223> Cys-PEG

<400> 324

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<222> (24)..(24)
<223> Cys-PEG

<400> 325

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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<223> Cys-PEG

<400> 326

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<223> Cys-PEG

<400> 327

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 329

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1 5 10 15

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20 25

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<220>
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Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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<400> 334

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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<400> 335

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
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Arg Ala Ala Glu Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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20 25

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<400> 338

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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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<222> (24)..(24)
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<400> 339

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

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<223> Lactam ring between side chains at positions 12 and 16

<220>
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<222> (24)..(24)
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<400> 340

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
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<210> 341
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<222> (24)..(24)
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<400> 341

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly
20 25

<210> 342
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<400> 342

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
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<210> 343
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<400> 343

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 344

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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
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<210> 345
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<223> c-term amidation

<220>
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<400> 345

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
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<223> (Des-amino)His

<220>
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<400> 346

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 347
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<223> (Des-amino)His

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<400> 347

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 348

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

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<220>
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<400> 349

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

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<220>
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<400> 350

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys

1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 351
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<400> 351

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Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 352
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<400> 352

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

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<400> 353

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 354
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<223> D-Ala

<220>
<221> MOD_RES
<222> (16)..(16)
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<400> 354

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 355
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<400> 355

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 356
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<220>
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<222> (16)..(16)
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<400> 356

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 357
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<222> (16)..(16)
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<400> 357

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 358
<211> 29
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<400> 358

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 359
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<212> PRT
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<222> (16)..(16)
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<400> 359

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1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 360
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<223> c-term amidation

<220>
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<222> (16)..(16)
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<400> 360

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 361
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<212> PRT
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<220>
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<222> (16)..(16)
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<400> 361

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 362
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<223> (Des-amino)His

<220>
<221> MOD_RES
<222> (16)..(16)
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<400> 362

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<400> 363

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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<220>
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<400> 364

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 365
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<222> (16)..(16)
<223> Cys-PEG

<400> 365

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 366
<211> 29
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<222> (2)..(2)
<223> D-Ala

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Cys-PEG

<400> 366

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 367
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<223> D-Ala

<220>
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<222> (16)..(16)
<223> Cys-PEG

<400> 367

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 368

<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<223> D-Ala

<220>
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<222> (16)..(16)
<223> Cys-PEG

<400> 368

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 369
<211> 29
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<220>
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<222> (2)..(2)
<223> D-Ala

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Cys-PEG

<400> 369

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 370
<211> 29
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<220>
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<222> (2)..(2)
<223> D-Ala

<220>
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<222> (16)..(16)
<223> Cys-PEG

<400> 370

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 371
<211> 29
<212> PRT
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<220>
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<222> (2)..(2)
<223> D-Ala

<220>
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<222> (16)..(16)
<223> Cys-PEG

<400> 371

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 372
<211> 29
<212> PRT
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<220>
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<220>
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<222> (2)..(2)
<223> D-Ala

<220>
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<222> (16)..(16)
<223> Cys-PEG

<400> 372

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 373
<211> 29
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<220>
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<222> (2)..(2)
<223> D-Ala

<220>

<221> MOD_RES
<222> (16)..(16)
<223> Cys-PEG

<400> 373

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly
20 25

<210> 374
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 374

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 375
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 375

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 376

<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 376

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 377
<211> 29
<212> PRT
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<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 377

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 378
<211> 29
<212> PRT
<213> Artificial Sequence

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<223> c-term amidation

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 378

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 379
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 379

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 380
<211> 29
<212> PRT
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<220>
<223> Synthetic peptide

<220>
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<223> c-term amidation

<400> 380

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 381
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation; lactam ring between side chains at positions 16 and 20

<400> 381

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 382
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 382

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr

20 25

<210> 383
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 383

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 384
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<212> PRT
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 384

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 385
<211> 29

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 385

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 386
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 386

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 387
<211> 29
<212> PRT
<213> Artificial Sequence

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<223> c-term amidation

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 387

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 388
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 388

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 389
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

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<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 389

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 390
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 390

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 391
<211> 29
<212> PRT
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 391

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 392
<211> 29
<212> PRT
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<220>
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<220>
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<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<400> 392

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 393
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
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<223> (Des-amino)His

<220>
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<222> (16)..(20)

<223> Lactam ring between side chains at positions 16 and 20

<400> 393

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 394
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 394

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 395
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
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<220>
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<222> (1)..(1)
<223> (Des-amino)His

<220>
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<222> (16)..(20)

<223> Lactam ring between side chains at positions 16 and 20

<400> 395

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 396
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 396

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 397
<211> 29
<212> PRT
<213> Artificial Sequence

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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 397

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 398
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<223> (Des-amino)His

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 398

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 399
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 399

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 400
<211> 29
<212> PRT
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 400

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 401
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation

<220>
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<222> (1)..(1)
<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 401

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 402
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<400> 402

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 403
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<400> 403

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 404
<211> 29
<212> PRT
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<220>
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<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 404

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 405
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> aminoisobutyric acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 405

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 406
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
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<223> c-term amidation

<220>
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<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 406

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 407
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 407

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 408
<211> 29
<212> PRT
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<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
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<400> 408

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 409
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 409

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 410
<211> 29
<212> PRT
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<223> Aminoisobutyric acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 410

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 411
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Aminoisobutyric acid

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 411

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 412
<211> 29
<212> PRT
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<220>
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<400> 412

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
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<220>
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<400> 413

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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 414
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<400> 414

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 415
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<220>
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<223> Aminoisobutyric acid

<220>
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<223> Lactam ring between side chains at positions 16 and 20

<400> 415

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

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<223> D-Ala

<400> 416

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

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<223> D-Ala

<400> 417

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 418
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<223> D-Ala

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<223> Lactam ring between side chains at positions 16 and 20

<400> 418

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

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<400> 419

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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

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<400> 420

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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
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<210> 421
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<220>
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<223> Lactam ring between side chains at positions 16 and 20

<400> 421

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 422
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<220>
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<223> D-Ala

<400> 422

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 423
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<220>
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<223> Lactam ring between side chains at positions 16 and 20

<400> 423

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 424
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<400> 424

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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<210> 425
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<400> 425

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 426
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<400> 426

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 427
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<222> (2)..(2)
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<400> 427

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 428
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<400> 428

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 429
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<400> 429

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 430
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<400> 430

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 431
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<400> 431

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 432
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<400> 432

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 433
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<400> 433

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 434
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<400> 434

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 435
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<400> 435

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 436
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<400> 436

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 437
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<223> Lactam ring between side chains at positions 16 and 20

<400> 437

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 438
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<400> 438

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1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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<210> 439
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<223> Lactam ring between side chains at positions 12 and 16

<400> 439

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 440
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<400> 440

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1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
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<400> 441

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 442
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<400> 442

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 443
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<223> Lactam ring between side chains at positions 16 and 20

<400> 443

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 444
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<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 444

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 445
<211> 29
<212> PRT
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> (Des-amino)His

<400> 445

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 446
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<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 446

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 447
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<223> Lactam ring between side chains at positions 12 and 16

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<222> (1)..(1)
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<400> 447

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 448
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 448

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 449
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<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 449

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 450
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<400> 450

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 451
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<223> Lactam ring between side chains at positions 16 and 20

<400> 451

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 452
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 452

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 453
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 453

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 454
<211> 29
<212> PRT
<213> Artificial Sequence

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<220>
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<222> (1)..(1)
<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 454

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Ala Ala Glu Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 455
<211> 29
<212> PRT
<213> Artificial Sequence

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<223> c-term amidation

<220>
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<222> (1)..(1)
<223> (Des-amino)His

<400> 455

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 456
<211> 29
<212> PRT
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<223> (Des-amino)His

<220>
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<222> (12)..(16)
<223> Lactam ring between side chains at positions 12 and 16

<400> 456

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 457
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<223> (Des-amino)His

<220>
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<222> (16)..(20)
<223> Lactam ring between side chains at positions 16 and 20

<400> 457

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 458
<211> 29
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<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<400> 458

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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<400> 472

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<400> 482

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1 5 10 15

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<400> 483

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1 5 10 15

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Ser Gly Ala Pro Pro Pro Ser Cys
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20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys

35 40

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20 25 30

Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser Cys
35 40

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Ser Gly Ala Pro Pro Pro Ser Cys
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20 25 30

Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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20 25 30

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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

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20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

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Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

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Ser Gly Ala Pro Pro Pro Ser Cys
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20 25 30

Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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Ser Gly Ala Pro Pro Pro Ser

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1 5 10 15

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20 25 30

Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Val Lys Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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<400> 526

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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Gly Gly Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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<400> 527

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Gly
20 25 30

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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

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Arg Arg Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

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20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys Cys
35 40

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20 25 30

Ser Gly Ala Pro Pro Pro Ser
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

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20 25

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<223> Acylated with C18 fatty acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 539

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 540
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-W-C18

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C18 fatty acid

<400> 540

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 541
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>

<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-W-C16 Cys24-40K

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 541

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 542
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-C16

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acid

<400> 542

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 543
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-C16

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<400> 543

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 544
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-C18

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C18 fatty acid

<400> 544

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 545
<211> 29
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 545

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 546
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-W-C16 Cys 24-40K

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising C16 fatty acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 546

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 547
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-C18 Cys24-40K

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C18 fatty acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 547

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 548
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Glucagon E16 K20 K10-C18 Cys24-40K

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C18 fatty acid

<220>
<221> MOD_RES

<222> (24)..(24)
<223> Cys-PEG

<400> 548

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 549
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon E16 K20 K10-C16 amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to Glu residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 549

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 550
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE

<223> Chimera 2 truncated by one amino acid

<400> 550

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn
20 25

<210> 551
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera 2 truncated by two amino acids

<400> 551

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met
20 25

<210> 552
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> aa 1-28, E16 K20 C-terminal amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 552

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn
20 25

<210> 553
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> aa 1-27 E16 K20 C-terminal amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<400> 553

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Lys Met
20 25

<210> 554
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Norleucine

<400> 554

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Xaa Asn Thr
20 25

<210> 555
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridging side chains at positions 16 and 20

<400> 555

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 556
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera 2 with AIB at 16

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<400> 556

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 557
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<400> 557

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 558
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 558

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 559
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutric Acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutric Acid

<400> 559

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 560
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<400> 560

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 561
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Covalently bound to Trp residue comprising a C16 fatty acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Aminoisobutyric acid

<400> 561

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 562
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric acid

<400> 562

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 563
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 563

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 564
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 564

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr

20 25

<210> 565
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 565

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 566
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>

<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via beta-Ala-beta-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 566

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 567
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via 6-aminohexanoic acid spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 567

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 568
<211> 29
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Leu-Leu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 568

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 569
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Pro-Pro spacer

<220>
<221> MOD_RES
<222> (16)..(16)

<223> Aminoisobutryic Acid

<400> 569

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 570
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 570

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 571
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 571

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 572
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 572

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 573
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 573

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 574
<211> 29

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 574

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 575
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES

<222> (16)..(16)
<223> Aminoisobutryic acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 575

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 576
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 576

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 577
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<400> 577

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 578
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<400> 578

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 579
<211> 29
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> AA-C16 Glucagon Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Ala-Ala spacer

<400> 579

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 580
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera 2, AIB2, Lys10, Cys24-PEG

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 580

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 581
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2E16K20K30-C14 Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C14 fatty acyl group

<400> 581

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 582
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2K10(C14)E16K20-Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group

<400> 582

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 583
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2E16K20K30-C16 Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C16 fatty acyl group

<400> 583

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 584
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2K10(C16)E16K20-Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<400> 584

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 585
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide Chimera 2-AIB2-K10-acylated

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C18 fatty acyl group

<220>
<221> MOD_RES
<222> (24)..(24)

<223> Pegylated

<400> 585

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 586
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide Chimera 2-AIB2-K30-acylated

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C18 fatty acyl group

<400> 586

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Lys
20 25 30

<210> 587
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> DMIA

<400> 587

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 588
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> DMIA

<220>
<221> MOD_RES
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 588

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 589
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<400> 589

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 590
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 590

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 591
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is a Glutamine analog

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 591

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 592
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is a Glutamine analog

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 592

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 593
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 593

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 594
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetamidomethyl-cysteine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 594

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 595
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)

<223> Xaa is Norleucine

<400> 595

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 596
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is carbamoyldiaminopropanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 596

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 597
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 597

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 598
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methionine sulfoxide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 598

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 599
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Acetylornithine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Norleucine

<400> 599

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 600
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic Acid

<400> 600

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 601
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutyric Acid

<400> 601

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 602
<211> 29

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutyric Acid

<400> 602

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 603
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic Acid

<400> 603

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Glu
20 25

<210> 604
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutyric Acid

<400> 604

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 605
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic Acid

<400> 605

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ser Asp Phe Val Ser Trp Leu Leu Asp Glu
20 25

<210> 606
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic Acid

<400> 606

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Thr Asp Phe Val Thr Trp Leu Leu Asp Glu
20 25

<210> 607
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to a C14 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 607

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 608
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> DMIA

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 608

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 609
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES

<222> (1)..(1)
<223> DMIA

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C18 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 609

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 610
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 610

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 611
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 611

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 612
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C18 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 612

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 613
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group

<400> 613

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 614
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<400> 614

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 615
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to a C18 fatty acyl group

<400> 615

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 616
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to a C14 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 616

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 617
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 617

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 618
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 618

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 619
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group via di peptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 619

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 620
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covelently bound to C16 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 620

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 621
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 621

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 622
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<400> 622

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr Lys
20 25 30

<210> 623
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> beta-Ala-beta-Ala - C16 Glucagon Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via beta-Ala-beta-Ala spacer

<400> 623

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 624
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera-2 Aib2C24Mal40KPEG

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with a maleimide-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 624

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 625
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera-2 Aib2E16K20lactamC24Mal40KPEG

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of the amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with a maleimide-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 625

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 626
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2E16K20lactamC24amideMal40KPEG

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with a maleimide-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 626

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 627

<400> 627
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<210> 628

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Dmia1E16K20lactamC24Mal40KPEG

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with a maleimide-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 628

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 629
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Dmia1E16K20lactamC24Mal40KPEG

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with a maleimide-activated PEG

<400> 629

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 630
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Dmia1E16K20lactamC24thioether40KPEG

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at position 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with haloacetyl-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 630

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 631
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Chimera2 Aib2E3C24-Thioether40K PEG(NOF)

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with haloacetyl-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 631

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 632
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>

<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 632

Xaa Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Glu Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 633
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16C24K10(rErE-C16) C24PEG40K amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with haloacetyl-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 633

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 634
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16K10(AA-C14)C24PEG40K TE amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with haloacetyl-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 634

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 635
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16K10(AA-C16) amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 635

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 636
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16K10(rErE-C16) amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group via gamma-Glu-gamma-Glu

spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 636

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 637
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 637

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 638
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 638
caaggtccag ggaggttgtg 20

<210> 639
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 639
ccaaaggtaa gctgtccata agga 24

<210> 640
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 640
ctctcccaag agtcacatgt cc 22

<210> 641
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic primer

<400> 641
caataactcg gtcccctaca ac 22

<210> 642
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 642

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 643
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<400> 643

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 644
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<400> 644

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 645
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<400> 645

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 646
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu

spacer

<400> 646

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 647
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<400> 647

His Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 648
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<400> 648

His Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 649
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<400> 649

His Xaa Gln Gly Thr Phe Ile Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 650
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>

<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<400> 650

His Xaa Gln Gly Thr Phe Ile Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 651
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 651

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 652
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 652

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 653
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>

<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<400> 653

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Lys
20 25

<210> 654
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<400> 654

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Lys
20 25

<210> 655

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu-gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 655

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 656
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via gamma-Glu spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 656

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 657
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 657

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 658
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 658

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 659
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)

<223> Aminoisobutryic Acid

<400> 659

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 660
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylated

<400> 660

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 661
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 661

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 662
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2E16K20K30-C14 Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C14 fatty acyl group

<400> 662

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 663

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2K10(C14)E16K20-Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group

<400> 663

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 664
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2E16K20K30-C16 Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>

<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C16 fatty acyl group

<400> 664

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 665
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide dS2K10(C16)E16K20-Gluc Amide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<400> 665

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 666
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group

<400> 666

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 667
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group

<400> 667

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 668
<211> 29

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to a C18 fatty acyl group

<400> 668

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 669
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<400> 669

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 670
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16C24K10(rErE-C16) C24PEG40K amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C14 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether made by reaction of peptide with haloacetyl-activated PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 670

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 671
<211> 29
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Glucagon Aib2Aib16K10(rErE-C16) amide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Covalently bound to C16 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 671

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 672
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES

<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<400> 672

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 673
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 673

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 674
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<400> 674

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 675
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 675

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 676
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 676

His Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 677
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<400> 677

His Xaa Gln Gly Thr Phe Ile Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 678
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
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<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 678

His Xaa Gln Gly Thr Phe Ile Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 679
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 679

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu

1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 680
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<400> 680

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 681
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES

<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<400> 681

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Lys
20 25

<210> 682
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Dmia

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam ring between side chains of amino acids at positions 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<400> 682

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Lys
20 25

<210> 683
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 683

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 684
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> c-term amidation

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)

<223> Acylated with a C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 684

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 685

<400> 685
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<210> 686

<400> 686
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<210> 687

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<210> 700

<400> 700
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<210> 701
<211> 29
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 701

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 702
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analog

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 702

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 703
<211> 31
<212> PRT
<213> Homo sapiens

<400> 703

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 704
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (30)..(30)
<223> AMIDATION

<400> 704

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 705
<211> 28
<212> PRT
<213> Homo sapiens

<400> 705

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly
20 25

<210> 706
<211> 37
<212> PRT
<213> Homo sapiens

<400> 706

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 707
<211> 42
<212> PRT
<213> Homo sapiens

<400> 707

Tyr Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Asp Trp Lys His Asn Ile Thr Gln
35 40

<210> 708
<211> 33
<212> PRT
<213> Homo sapiens

<400> 708

His Ala Asp Gly Ser Phe Ser Asp Glu Met Asn Thr Ile Leu Asp Asn
1 5 10 15

Leu Ala Ala Arg Asp Phe Ile Asn Trp Leu Ile Gln Thr Lys Ile Thr
20 25 30

Asp

<210> 709
<211> 49
<212> PRT
<213> Homo sapiens

<400> 709

Tyr Leu Tyr Gln Trp Leu Gly Ala Pro Val Pro Tyr Pro Asp Pro Leu
1 5 10 15

Glu Pro Arg Arg Glu Val Cys Glu Leu Asn Pro Asp Cys Asp Glu Leu
20 25 30

Ala Asp His Ile Gly Phe Gln Glu Ala Tyr Arg Arg Phe Tyr Gly Pro
35 40 45

Val

<210> 710
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4

<400> 710

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 711
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4

<220>
<221> MOD_RES
<222> (10)..(10)
<223> AMIDATION

<400> 711

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 712
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Pegylation

<400> 712

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Cys
1 5 10

<210> 713
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide fragment representing the carboxy terminal 13 amino acids of GIP peptide

<400> 713

Lys Gly Lys Lys Asn Asp Trp Lys His Asn Ile Thr Gln
1 5 10

<210> 714
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide fragment representing the carboxy terminal 8 amino acids of oxyntomodulin

<400> 714

Lys Arg Asn Arg Asn Asn Ile Ala
1 5

<210> 715
<211> 6
<212> PRT
<213> Artificial Sequence

<220>

<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (6)..(6)
<223> C-terminal amide

<400> 715

His Thr Arg Gly Thr Phe
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<210> 716
<211> 6
<212> PRT
<213> Artificial Sequence

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<222> (1)..(1)
<223> d-histidine

<220>
<221> MOD_RES
<222> (2)..(2)
<223> d-threonine

<220>
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<222> (3)..(3)
<223> d-arginine

<220>
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<222> (5)..(5)
<223> d-threonine

<220>
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<222> (6)..(6)
<223> d-phenylalanine

<220>
<221> MOD_RES
<222> (6)..(6)
<223> C-terminal amidation

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Xaa Xaa Xaa Gly Xaa Xaa
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<210> 717
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<213> Artificial Sequence

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<220>
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<223> pegylation

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

<210> 718
<211> 39
<212> PRT
<213> Heloderma suspectum

<400> 718

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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<210> 719
<211> 29
<212> PRT
<213> Homo sapiens

<400> 719

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

Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg
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<210> 720
<211> 28
<212> PRT
<213> Homo sapiens

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<222> (28)..(28)
<223> AMIDATION

<400> 720

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
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Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
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<210> 721
<211> 27
<212> PRT
<213> Homo sapiens

<400> 721

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu
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<210> 722
<211> 27
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (27)..(27)
<223> AMIDATION

<400> 722

His Ala Asp Gly Val Phe Thr Ser Asp Phe Ser Lys Leu Leu Gly Gln
1 5 10 15

Leu Ser Ala Lys Lys Tyr Leu Glu Ser Leu Met
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<210> 723
<211> 27
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (27)..(27)

<223> AMIDATION

<400> 723

His Ser Asp Gly Thr Phe Thr Ser Glu Leu Ser Arg Leu Arg Glu Gly
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Ala Arg Leu Gln Arg Leu Leu Gln Gly Leu Val
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<210> 724
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<222> (24)..(24)
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<222> (30)..(30)
<223> C-terminal amidation

<400> 724

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Asn
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<210> 725
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<223> Covalently bound to 40K PEG via thioether

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<222> (29)..(29)
<223> AMIDATION

<400> 725

His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<210> 726
<211> 31
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<222> (1)..(1)
<223> d-lysine

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Sarcosine (N-methyl glycine)

<220>
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<222> (4)..(4)
<223> Xaa is AIB

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<222> (24)..(24)
<223> Covalently bound to 40kDa PEG via thioether

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<222> (31)..(31)
<223> AMIDATION

<400> 726

Lys Gly His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
1 5 10 15

Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<210> 727
<211> 31
<212> PRT
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<223> d-lysine

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<222> (2)..(2)
<223> N-hexyl-glycine

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<223> Xaa is AIB

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Lys Gly His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
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Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<210> 728
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<212> PRT
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Lys Phe His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
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Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<222> (16)..(20)
<223> Lactam ring between side chains of amino acids

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<222> (24)..(24)
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<222> (29)..(29)
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<400> 730

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 731
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<212> PRT
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<220>
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<222> (30)..(30)
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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Thr Asn
20 25 30

<210> 732

<211> 8
<212> PRT
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<220>
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<220>
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<222> (3)..(3)
<223> Xaa is His, d-His, Ala, or N-methyl-His

<220>
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<222> (8)..(8)
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<400> 732

Xaa Xaa Xaa Ser Arg Gly Thr Phe
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<222> (26)..(26)
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Lys Xaa His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
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Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<212> PRT
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<223> d-Lys

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<223> Xaa is Sar

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<400> 734

Lys Xaa His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
1 5 10 15

Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Asn
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<222> (31)..(31)
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Lys Xaa Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu
1 5 10 15

Asp Glu Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<210> 736
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<222> (2)..(2)
<223> N-hexyl-Gly

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<222> (4)..(4)
<223> Xaa is AIB

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<221> MISC_FEATURE
<222> (26)..(26)
<223> Covalently bound to 40K PEG via thioether

<220>
<221> MOD_RES
<222> (31)..(31)
<223> AMIDATION

<400> 736

Lys Gly His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
1 5 10 15

Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25 30

<210> 737
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<222> (2)..(2)
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<223> Xaa is AIB

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Lys Gly His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
1 5 10 15

Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Asn
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<210> 738
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Lys Gly Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu
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Asp Glu Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<210> 739
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Lys Phe His Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
1 5 10 15

Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
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<210> 740
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Lys Phe His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu
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Asp Glu Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Asn
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Lys Phe Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu
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Asp Glu Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr
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<212> PRT
<213> Homo sapiens

<400> 801

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1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 802
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<220>
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<223> Xaa is Met, Leu or Nle

<400> 802

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 803
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<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 803

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Xaa Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 804
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<222> (21)..(21)
<223> Xaa is Asp, Cys, Orn, homocysteine or acetyl phenylalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 804

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Xaa Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 805
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Gln, Cys, Orn, homocysteine or acetyl phenylalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 805

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Xaa Trp Leu Xaa Asp Thr
20 25

<210> 806
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Xaa is Asp, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Gln, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 806

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Xaa Phe Val Xaa Trp Leu Xaa Asp Thr
20 25

<210> 807
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES

<222> (28)..(28)
<223> Xaa is Lys, Arg, His, Asp, Glu, cysteic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr, Lys, Arg, His, Asp, Glu, cysteic acid or homocysteic acid

<400> 807

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Xaa Xaa
20 25

<210> 808
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Xaa is Asp or Glu

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr, Asp or Glu

<400> 808

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Xaa Xaa
20 25

<210> 809
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Asp or Glu

<400> 809

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Xaa
20 25

<210> 810
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 810

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 811
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 811

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 812
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Lys, Arg or His

<400> 812

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Xaa
20 25

<210> 813
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 813

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Glu Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 814
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)

<223> Xaa is Met, Leu or Nle

<400> 814

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Cys
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 815
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 815

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Cys Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 816
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 816

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Cys Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 817
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 817

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Xaa Asp Thr
20 25

<210> 818
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 818

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Arg Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Lys Phe Val Gln Trp Leu Xaa Asp Thr
20 25

<210> 819
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<400> 819

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Arg Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Lys Trp Leu Xaa Asp Thr
20 25

<210> 820
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing carboxy terminal 10 amino acids of Exendin-4

<400> 820

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 821
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy terminal 8 amino acids of oxyntomodulin

<400> 821

Lys Arg Asn Arg Asn Asn Ile Ala
1 5

<210> 822
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the amino 4 amino acids of oxyntomodulin carboxy terminus of SEQ ID NO: 21

<400> 822

Lys Arg Asn Arg
1

<210> 823
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4

<220>
<221> MOD_RES
<222> (10)..(10)
<223> AMIDATION

<400> 823

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 824
<211> 39

<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 824

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 825
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 825

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 826
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 826

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Lys Arg Asn
20 25 30

Arg

<210> 827
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 827

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Cys Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 828
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 828

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 829
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> 2-butyrolactone bound through Cys thiol group

<400> 829

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 830
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Carboxymethyl group bound through Cys thiol group

<400> 830

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 831
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 831

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 832
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analog

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Xaa is Asp, Glu, Lys, Arg or His

<400> 832

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Xaa
20 25 30

<210> 833
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Xaa is Asn, Lys, Arg, His, Asp or Glu

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr, Lys, Arg, His, Asp or Glu

<400> 833

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Xaa Xaa
20 25

<210> 834
<211> 29
<212> PRT
<213> Artificial Sequence

<220>

<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr or an acidic amino acid

<400> 834

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Xaa Xaa
20 25

<210> 835
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 835

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Glu Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 836
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 836

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Glu Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 837
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 837

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Glu Thr Lys Arg Asn
20 25 30

Arg

<210> 838
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analogue

<400> 838

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Glu Thr
20 25

<210> 839
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is any amino acid

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is any amino acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Met comprises Z

<400> 839

Xaa Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met
20 25

<210> 840
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is alpha, alpha-dimethyl imidiazole acetic acid (DMIA)

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylation

<400> 840

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Met Asn Thr

20 25

<210> 841
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is alpha, alpha-dimethyl imidiazole acetic acid (DMIA)

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Glutamine to alanine mutation

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Pegylation

<400> 841

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Ala Trp Leu Met Asn Cys
20 25

<210> 842
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is alpha, alpha-dimethyl imidiazole acetic acid (DMIA)

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Pegylation

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle or Leu

<400> 842

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Cys Trp Leu Xaa Asn Thr
20 25

<210> 843
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is alpha, alpha-dimethyl imidiazole acetic acid (DMIA)

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Glutamine to alanine mutation

<220>
<221> MISC_FEATURE
<222> (27)..(27)
<223> Xaa is Nle or Leu

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Pegylation

<400> 843

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Ala Trp Leu Xaa Asn Cys

20 25

<210> 844
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle 27, and Asp 28

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 844

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Asp Thr
20 25

<210> 845
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle27 , Asp 28, and Glu 29

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 845

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 846
<211> 30

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle 27, Asp 28, and Glu 30

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 846

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Asp Thr Glu
20 25 30

<210> 847
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle 27, Glu 28, and Glu 29

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 847

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Glu Glu
20 25

<210> 848
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle 27, Glu 28, and Glu 30

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 848

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Glu Thr Glu
20 25 30

<210> 849
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<220>
<221> MISC_FEATURE
<222> (27)..(27)
<223> SEQ ID NO: 1 with Ala 20, Ala 24, Nle 27, Glu 29, and Glu 30

<400> 849

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Xaa Asn Glu Glu
20 25 30

<210> 850
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE

<223> SEQ ID NO: 1 with Ala 20, Glu 21, Aia 24, Nle 27, and Asp 28

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 850

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Thr
20 25

<210> 851
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Glu 21, Ala 24, Nle 27, Asp 28, and Glu
29

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 851

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 852
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Glu 21, Ala 24, Nle 27, Asp 28, and Glu
30

<220>

<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 852

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 853
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO :1 with Ala 20, Glu 21, Ala 24, Nle 27, Glu 28, and Glu 29

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 853

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Glu Glu
20 25

<210> 854
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Glu 21, Ala 24, Nle 27, Glu 28, and Glu 30

<400> 854

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 855
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Ala 20, Glu 21, Ala 24, Nle 27, Glu 29, and Glu 30

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 855

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asn Glu Glu
20 25 30

<210> 856
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MISC_FEATURE
<223> SEQ ID NO: 1 with Thr 16, Ala 20, Glu 21, Ala 24, Nle 27, Asp 28, and Glu29

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 856

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu

20 25

<210> 857
<211> 31
<212> PRT
<213> Homo sapiens

<400> 857

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 858
<211> 30
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (30)..(30)
<223> AMIDATION

<400> 858

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 859
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Glutamine analog

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 859

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr

1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 860
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Glutamine analog

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic acid

<400> 860

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 861
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 861

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 862

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetamidomethyl-cysteine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 862

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 863
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synethic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 863

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 864
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Carbamoyldiaminopropanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 864

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 865
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 865

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 866
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methionine sulfoxide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 866

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 867
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetylornithine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 867

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 868
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>

<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic acid

<400> 868

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 869
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic acid

<400> 869

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 870
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 870

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 871
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
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<222> (3)..(3)
<223> Xaa is acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 871

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Glu
20 25

<210> 872
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES

<222> (39)..(39)
<223> AMIDATION

<400> 872

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 873
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryric acid

<400> 873

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ser Asp Phe Val Ser Trp Leu Leu Asp Glu
20 25

<210> 874
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>

<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aminoisobutryic acid

<400> 874

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Thr Asp Phe Val Thr Trp Leu Leu Asp Glu
20 25

<210> 875
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 875

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Glu
20 25

<210> 876
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 876

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Glu
20 25

<210> 877
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any naturally occurring amino acid

<400> 877

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 878
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 878

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 879
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C14 fatty acyl group

<220>
<221> MOD_RES
<222> (30)..(30)
<223> AMIDATION

<400> 879

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 880
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C14 fatty acyl group

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 880

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 881
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (30)..(30)

<223> Acylated with a C16 fatty acyl group

<220>
<221> MOD_RES
<222> (30)..(30)
<223> AMIDATION

<400> 881

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 882
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-Ser

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 882

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 883
<211> 29
<212> PRT
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<220>
<223> Synthetic peptide

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C18 fatty acyl group

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 883

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 884
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aminoisobutryic Acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Cys-PEG

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Acylated with a C18 fatty acyl group

<220>
<221> MOD_RES
<222> (30)..(30)
<223> AMIDATION

<400> 884

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Thr Lys
20 25 30

<210> 885
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Ser or alpha, alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Gln or alpha, alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Xaa is Asp or alpha, alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Gln or alpha, alpha-disubstituted amino acid

<400> 885

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Xaa Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 886
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 886

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 887
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Xaa is Aib

<400> 887

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Xaa Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 888
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<400> 888

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 889
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Xaa is Aib

<400> 889

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Xaa Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 890
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Aib

<400> 890

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 891
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)

<223> Xaa is Aib

<400> 891

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 892
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Aib

<400> 892

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 893
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Aib

<400> 893

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 894
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa is Aib

<400> 894

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Xaa Trp Leu Met Asn Thr
20 25

<210> 895
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 895

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 896
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
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<222> (2)..(2)
<223> Xaa is Aib

<220>
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<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 896

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 897
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 897

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 898
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via Ala-Ala spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 898

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 899
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with a C16 fatty acyl group via dipeptide spacer

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (29)..(29)
<223> AMIDATION

<400> 899

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 900
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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<223> Xaa is Aib

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Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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Arg Arg Ala Gln Asp Phe Val Cys Trp Leu Met Asn Thr
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<222> (30)..(30)
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<400> 916

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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
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<223> AMIDATION

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His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

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<223> AMIDATION

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His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu

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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys
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Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr
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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1002
<211> 31
<212> PRT
<213> Homo sapiens

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<223> GLP-1(7-37)

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His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 1003
<211> 30
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<223> GLP-1(7-36) amidated

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<222> (30)..(30)
<223> C-terminal amidation

<400> 1003

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 1004
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Tyr Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
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Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln Lys Gly Lys
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Lys Asn Asp Trp Lys His Asn Ile Thr Gln
35 40

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<223> Lactam bridge between residues 16 and 20.

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Ile His Gln Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
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<210> 1006
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<223> Analog 62

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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20.

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 1007
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<223> Lactam bridge between residues 12 and 16.

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Ile His Gln Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
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<210> 1008
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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Glu Phe Ile Ala Trp Leu Leu Ala Gln
20 25

<210> 1009
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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
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20 25

<210> 1010
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Ile His Gln Glu Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 1011
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<223> Lactam bridge between residues 16 and 20

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
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Ile His Gln Lys Glu Phe Ile Cys Trp Leu Leu Ala Gln
20 25

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<223> PEG (20kDa) covalently attached to Cysteine

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
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Ile His Gln Lys Glu Phe Ile Cys Trp Leu Leu Ala Gln
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<210> 1013
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<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 92

<400> 1013

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Lys His Gln Lys Glu Phe Ile Ala Trp Leu Leu Ala Gln
20 25

<210> 1014
<211> 29
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 93

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (17)..(21)
<223> Lactam bridge between residues 17 and 21

<400> 1014

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Lys His Gln Lys Glu Phe Ile Ala Trp Leu Leu Ala Gln
20 25

<210> 1015
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 95

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1015

His Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1016
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 96

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1016

Tyr Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1017
<211> 29
<212> PRT
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<220>
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<220>
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<223> Analog 97

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1017

His Ala Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1018
<211> 29
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 98

<220>

<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1018

Tyr Ala Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1019
<211> 42
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 99

<400> 1019

Tyr Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1020
<211> 42
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 100

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<400> 1020

Tyr Xaa Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1021
<211> 42
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 101

<400> 1021

Tyr Ala Pro Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1022
<211> 42
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 102

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<400> 1022

Tyr Xaa Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Cys Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1023
<211> 42
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 104

<400> 1023

Tyr Ala Pro Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Cys Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1024
<211> 42
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 105

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> PEG (40kDa) attached to Cysteine

<400> 1024

Tyr Ala Pro Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Cys Trp Leu Leu Ala Gln Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1025
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 106

<400> 1025

Tyr Ala Glu Gly Thr Phe Ile Ser Asp Tyr Ser Ile Ala Met Asp Lys
1 5 10 15

Ile His Gln Gln Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1026
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 107

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1026

His Ser Gln Gly Thr Phe Ile Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 1027
<211> 29

<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 108

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1027

His Ser Gln Gly Thr Phe Ile Ser Asp Tyr Ser Lys Ala Leu Asp Glu
1 5 10 15

Ile His Gln Lys Glu Phe Ile Ala Trp Leu Met Asn Thr
20 25

<210> 1028
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 109

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1028

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1029
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 110

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1029

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1030
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 111

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1030

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1031
<211> 24
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 113

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is 3-phenyllactic acid

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge between residues 11 and 15

<400> 1031

Xaa Ile Ser Asp Tyr Ser Ile Ala Met Asp Glu Ile His Gln Lys Asp
1 5 10 15

Phe Val Asn Trp Leu Leu Ala Gln
20

<210> 1032
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 114

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is 3-phenyllactic acid

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge between residues 11 and 15

<400> 1032

Xaa Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Ile His Gln Lys Asp
1 5 10 15

Phe Val Asn Trp Leu Leu Ala Gln
20

<210> 1033
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 115

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1033

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1034
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 116

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1034

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1035
<211> 29
<212> PRT
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<220>
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<223> Analog 118

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1035

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Glu Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1036
<211> 39
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 120

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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1036

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1037
<211> 29
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 124

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1037

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1038
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 125

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1038

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Val Asn Trp Leu Leu Ala Gln
20 25

<210> 1039
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>

<221> MISC_FEATURE
<223> Analog 127

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1039

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1040
<211> 39
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 128

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1040

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Ile Ala Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1041
<211> 39
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 129

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1041

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Ile His Gln Lys Asp Phe Ile Ala Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1042
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 139

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1042

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1043
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 140

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1043

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1044
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 141

<220>
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<222> (16)..(20)
<223> Lactam bridge between residuess 16 and 20

<400> 1044

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Met Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1045

<211> 39
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 142

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1045

Tyr Ala Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1046
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 143

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1046

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1047
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 144

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1047

Tyr Ala Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Met Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1048
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 145

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1048

Tyr Ala Gln Gly Thr Phe Ile Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1049
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 146

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1049

Tyr Ala Gln Gly Thr Phe Ile Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1050
<211> 39
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 147

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1050

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1051
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 148

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1051

Tyr Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1052
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 149

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1052

Tyr Ala Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu

1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1053
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 150

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1053

Tyr Ser Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1054
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 151

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1054

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1055
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 152

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1055

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1056
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>

<221> MISC_FEATURE
<223> Analog 154

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is hippuric acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1056

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1057
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 155

<220>
<221> MISC_FEATURE
<222> (12)..(16)
<223> Lactam bridge between residues 12 and 16

<400> 1057

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1058
<211> 39

<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 156

<220>
<221> MISC_FEATURE
<222> (20)..(24)
<223> Lactam bridge between residues 20 and 24

<400> 1058

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Glu Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1059
<211> 39
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 157

<220>
<221> MISC_FEATURE
<222> (24)..(28)
<223> Lactam bridge between residues 24 and 28

<400> 1059

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Glu Trp Leu Leu Lys Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1060
<211> 39
<212> PRT
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<220>
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<220>
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<223> Analog 158

<220>
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<223> Xaa is Aib

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1060

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1061
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 162

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1061

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Tyr Tyr Leu Asp Glu
1 5 10 15

Gln Ala Val Lys Glu Phe Val Asn Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1062
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 163

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1062

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly
20 25

<210> 1063
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 164

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>

<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1063

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly
20 25

<210> 1064
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 165

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1064

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1065
<211> 40
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>

<221> MISC_FEATURE
<223> Analog 166

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is d-alanine

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1065

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1066
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 167

<220>
<221> MISC_FEATURE
<222> (17)..(20)
<223> Lactam bridge between residues 17 and 20

<400> 1066

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Glu Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1067
<211> 39

<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 168

<220>
<221> MISC_FEATURE
<222> (18)..(21)
<223> Lactam bridge between residues 18 and 21

<400> 1067

Tyr Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Lys Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1068
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 169

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1068

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1069
<211> 40
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 170

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1069

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1070
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 172

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1070

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1071
<211> 40
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 174

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1071

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1072
<211> 39
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 175

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1072

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1073
<211> 40
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 176

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1073

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1074
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 177

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1074

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1075
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 178

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1075

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1076
<211> 29
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 179

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
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<223> PEG (40kDa) covalently attached to Cysteine

<400> 1076

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1077
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 182

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1077

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1078
<211> 29
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 186

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
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<223> PEG (40kDa) covalently attached to Cysteine

<400> 1078

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Cys Trp Leu Met Asn Gly
20 25

<210> 1079
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 191

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<400> 1079

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1080
<211> 34
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 192

<400> 1080

Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu Gln Ala Ala Lys Glu
1 5 10 15

Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1081
<211> 38
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 194

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa is Aib

<400> 1081

Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser Ser
20 25 30

Gly Ala Pro Pro Pro Ser
35

<210> 1082
<211> 26
<212> PRT
<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 197

<220>
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<222> (13)..(17)
<223> Lactam bridge between residues 13 and 17

<400> 1082

Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu Gln Ala Ala
1 5 10 15

Lys Glu Phe Val Asn Trp Leu Leu Ala Gly
20 25

<210> 1083
<211> 28
<212> PRT
<213> Artificial sequence

<220>
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<223> Analog 198

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<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge between residues 15 and 19

<400> 1083

Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu Gln
1 5 10 15

Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly
20 25

<210> 1084
<211> 40
<212> PRT
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<220>
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<223> Analog 199

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<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1084

Tyr Xaa Gln Gly Thr Phe Val Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1085
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<223> Analog 200

<220>
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<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1085

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Xaa Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1086
<211> 39
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 201

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<400> 1086

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1087
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 202

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1087

Tyr Xaa Gln Gly Thr Phe Val Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1088
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 203

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1088

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu

1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Xaa Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1089
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 204

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1089

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Arg Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1090
<211> 40
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 205

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
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<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1090

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Arg Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1091
<211> 43
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Analog 206

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1091

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln Cys
35 40

<210> 1092
<211> 43
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Analog 207

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<223> Xaa is Aib

<220>
<221> MISC_FEATURE
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<223> Lactam bridge between residues 16 and 20

<400> 1092

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln Cys
35 40

<210> 1093
<211> 43
<212> PRT
<213> Artificial sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Analog 208

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<222> (2)..(2)
<223> Xaa is Aib

<220>

<221> MISC_FEATURE
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<220>
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<223> PEG (40kDa) covalently attached to Cysteine

<400> 1093

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln Cys
35 40

<210> 1094
<211> 40
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<223> Analog 209

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<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (9)..(12)
<223> Lactam bridge between residues 9 and 12

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between residues 16 and 20

<400> 1094

Tyr Xaa Gln Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1095
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> CEX

<400> 1095

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 1096
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is any amino acid

<400> 1096

Xaa Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 1097
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 1097

Lys Arg Asn Arg Asn Asn Ile Ala
1 5

<210> 1098
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 1098

Lys Arg Asn Arg
1

<210> 1099
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
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<222> (20)..(20)
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<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> PEG (40kDa) covalently attached to Cysteine

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Ser Gly Ala Pro Pro Pro Ser Cys
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Ser Gly Ala Pro Pro Pro Ser Lys

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Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser
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Ser Gly Ala Pro Pro Pro Ser Cys
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Ser Gly Ala Pro Pro Pro Ser Lys
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Ser Gly Ala Pro Pro Pro Ser Lys
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Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

<210> 1162
<211> 39
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<220>
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<222> (20)..(20)
<223> Xaa is Aib

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<223> PEG (40kDa) covalently attached to Cysteine

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<400> 1162

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Cys Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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<210> 1163
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<400> 1163

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

<210> 1164
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<400> 1164

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

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<223> C-terminal amidation

<400> 1165

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1166
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<220>
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<400> 1166

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
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Gln Ala Ala Xaa Glu Phe Val Cys Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1167
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<220>
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<400> 1167

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
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Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1168
<211> 40
<212> PRT
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<400> 1168

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
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Gln Ala Ala Gln Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1169
<211> 40
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<220>
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<223> Xaa is Aib

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<400> 1169

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1170
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 1170

Gly Pro Ser Ser Gly Ala Pro Pro Pro Lys
1 5 10

<210> 1171
<211> 11
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<223> Xaa is Gly or a small, aliphatic or non-polar or slightly polar amino acid

<400> 1171

Xaa Gly Pro Ser Ser Gly Ala Pro Pro Pro Lys
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<210> 1172
<211> 12
<212> PRT
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<220>
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<220>
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<400> 1172

Xaa Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Lys
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<210> 1173
<211> 40
<212> PRT
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<400> 1173

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
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Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys

35 40

<210> 1174
<211> 40
<212> PRT
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<400> 1174

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
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Gln Ala Ala Gln Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1175
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<400> 1175

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1176
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<400> 1176

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1177
<211> 29
<212> PRT
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Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1178
<211> 29
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Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Ser
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Cys Trp Leu Leu Ala Gly
20 25

<210> 1179
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<220>
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<223> Xaa is Aib

<220>
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<222> (24)..(24)
<223> PEG (40kDa) covalently attached to Cysteine

<400> 1179

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly Arg
20 25 30

<210> 1180
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<220>
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Ile His Gln Gln Asp Phe Val Xaa Trp Leu Leu Ala Gln Lys Gly Lys

20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln
35 40

<210> 1181
<211> 40
<212> PRT
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<223> Substituted amino acid covalentaly linked to hydrophilic group

<400> 1181

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1182
<211> 29
<212> PRT
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<223> Substituted amino acid covalently linked to hydrophilic group

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<400> 1182

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Xaa Trp Leu Leu Ala Xaa
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<210> 1183
<211> 39
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<223> Substituted amino acid covalently linked to hydrophilic group

<400> 1183

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Xaa Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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<210> 1184
<211> 40
<212> PRT
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<400> 1184

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1185
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<400> 1185

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Xaa Trp Leu Leu Ala Gly
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<210> 1186
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<223> Substituted amino acid covalently linked to hydrophilic group

<400> 1186

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1187
<211> 29
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<223> Substituted amino acid covalently linked to hydrophilic group

<400> 1187

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Xaa Trp Leu Met Asn Gly
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<210> 1188
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<400> 1188

Tyr Xaa Gln Gly Thr Phe Val Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1189

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<400> 1189

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1 5 10 15

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20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

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<400> 1190

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Arg Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1191
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<220>
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<400> 1191

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Lys Gly Lys
20 25 30

Lys Asn Trp Leu Lys His Asn Ile Thr Gln Xaa
35 40

<210> 1192
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<220>
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<400> 1192

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1193
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<400> 1193

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Xaa Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1194
<211> 40
<212> PRT
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<400> 1194

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Xaa Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1195
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<400> 1195

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 1196
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Ser Gly Ala Pro Pro Pro Ser Xaa
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Ser Gly Ala Pro Pro Pro Ser Xaa
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Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
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Ser Gly Ala Pro Pro Pro Ser Lys Xaa
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Met Asn Gly Gly Pro Ser
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Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

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Ser Gly Ala Pro Pro Pro Ser Xaa
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Ser Gly Ala Pro Pro Pro Ser Xaa
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Ser Gly Ala Pro Pro Pro Ser Xaa
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<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Substituted amino acid covalently linked to hydrophilic group

<400> 1226

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Val Lys Gly Arg
20 25 30

<210> 1227
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>

<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (29)..(29)
<223> C-terminal amidation

<400> 1227

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly
20 25

<210> 1228
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser, D-Ala, Val, Gly, N-Methyl Ser, N-Methyl Ala, or Aib

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Lys, Glu, Ser, Orn, Dab, Aib or any alpha,
alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is any alpha, alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Ile, Leu, or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Xaa is Ala or Gly

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr, Ala, or Gly

<220>
<221> MISC_FEATURE

<222> (29)..(29)
<223> C-terminal amidation

<400> 1228

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Xaa
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Xaa Xaa Xaa
20 25

<210> 1229
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (29)..(29)
<223> C-terminal amidation

<400> 1229

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Lys
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Leu Ala Gly
20 25

<210> 1230
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is D-Ser, DAla, Val, Gly, N-Methyl Ser, N-Methyl Ala, or Aib

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Lys, Glu, Ser, Orn, Dab, Aib or any alpha,
alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is any alpha, alpha-disubstituted amino acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Ile, Leu, or Nle

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Xaa is Ala or Gly

<220>
<221> MOD_RES
<222> (29)..(29)
<223> Xaa is Thr, Ala, or Gly

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1230

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Xaa Xaa Xaa
20 25

<210> 1231
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Homodimer

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES

<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 14 Carbon fatty acyl group covalently bound to Lysine

<220>
<221> MOD_RES
<222> (40)..(40)
<223> C-terminal amidation

<220>
<221> DISULFID
<222> (41)..(41)
<223> Disulfide bond formed with Cys residue of a second peptide having the same structure.

<400> 1231

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

<210> 1232
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1232

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Met Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1233
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1233

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1234
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 16 Carbon fatty acyl group covalently bound to Lysine

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1234

Tyr Xaa Gln Gly Thr Phe Ile Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1235
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 16 Carbon fatty acyl group covalently bound to Lysine via a
dipeptide spacer

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1235

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1236
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 16 Carbon fatty acyl group covalently bound to Lysine via a dipeptide spacer

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1236

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1237
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> 16 Carbon fatty acyl group covalently bound to Lysine via dipeptide spacer

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> C-terminal amidation

<400> 1237

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1238
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> Homodimer

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)

<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 14 Carbon fatty acyl group covelently bound to Lysine

<220>
<221> MISC_FEATURE
<222> (41)..(41)
<223> C-terminal amidation

<220>
<221> MISC_FEATURE
<222> (41)..(41)
<223> Cys residue covalently attached to 20 kDa PEG which is in turn covalently attached to a Cys residue of a second peptide having the same structure

<400> 1238

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

<210> 1239
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MISC_FEATURE
<223> homodimer

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> 14 Carbon fatty acyl group covalently bound to Lysine

<220>
<221> MISC_FEATURE
<222> (41)..(41)
<223> PEG (5kDa) covalently bound to Cysteine

<220>
<221> MISC_FEATURE
<222> (41)..(41)
<223> C-terminal amidation

<220>
<221> MISC_FEATURE
<222> (41)..(41)
<223> Cys residue covalently attached to 5 kDa PEG which is in turn covalently attached to a Cys residue of a second peptide having the same structure

<400> 1239

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Lys
1 5 10 15

Gln Ala Ala Xaa Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys Cys
35 40

<210> 1240
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is a Glutamine analog

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1240

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1241

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is a Glutamine analog

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1241

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 1242
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1242

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1243
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetamidomethyl-cysteine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1243

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1244
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1244

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1245
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)

<223> Xaa is carbamoyldiaminopropanoic acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1245

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1246
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1246

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1247
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methionine sulfoxide

<220>

<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1247

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1248
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetylornithine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa is Nle

<400> 1248

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Thr
1 5 10 15

Arg Arg Ala Ala Glu Phe Val Ala Trp Leu Xaa Asp Glu
20 25

<210> 1249
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1249

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 1250
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1250

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu
20 25

<210> 1251
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Methylglutamine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1251

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Met Asp Glu

20 25

<210> 1252
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<400> 1252

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1253
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1253

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Glu
20 25

<210> 1254
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES

<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (39)..(39)
<223> C-terminal amidation

<400> 1254

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ala Asp Phe Val Ala Trp Leu Leu Asp Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1255
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1255

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Ser Asp Phe Val Ser Trp Leu Leu Asp Glu
20 25

<210> 1256
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<221> MOD_RES
<222> (3)..(3)
<223> Xaa is Acetyldiaminobutanoic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is Aib

<400> 1256

His Ser Xaa Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Thr Asp Phe Val Thr Trp Leu Leu Asp Glu
20 25

<210> 1257

<400> 1257
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<210> 1258

<400> 1258
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<210> 1259
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge links Glu16 and Lys20

<220>
<221> MOD_RES
<222> (40)..(40)
<223> Epsilon amine of Lys is attached to Ala-Ac-Cys(PEG), wherein the Ac-Cys(PEG) is a Cys residue comprising an alpha amino group capped with an acetyl group (CH3CO) and comprising a 40 kDa PEG covalently attached to its side chain

<400> 1259

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1260
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge links Glu16 and Lys20

<220>
<221> MOD_RES
<222> (40)..(40)
<223> Epsilon amine of Lys is attached to Arg-Ac-Cys(PEG), wherein the Ac-Cys(PEG) is a Cys residue comprising an alpha amino group capped with an acetyl group (CH3CO) and comprising a 40 kDa PEG covalently attached to its side chain

<400> 1260

Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1261
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge links Glu16 and Lys20

<220>
<221> MOD_RES
<222> (40)..(40)
<223> Cys-PEG covalently linked via thioether linkage

<400> 1261

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Val Asn Trp Leu Leu Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Cys
35 40

<210> 1262
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa is Aib

<400> 1262

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 1263

<400> 1263
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<210> 1283

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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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Gly Thr Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala
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Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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Asp Phe Val Gln Trp Leu Met Asn Thr
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Phe Val Gln Trp Leu Xaa Asn Thr
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Phe Val Gln Trp Leu Xaa Asn Thr
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<223> Xaa is Met, Leu or Nle

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Phe Val Gln Trp Leu Xaa Asn Thr
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1 5 10 15

Phe Val Xaa Trp Leu Xaa Asn Thr
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<210> 1312
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Phe Val Xaa Trp Leu Xaa Asn Thr
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Phe Val Gln Trp Leu Xaa Asn Cys
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Phe Thr Ser Xaa Tyr Ser Arg Tyr Leu Asp Ser Arg Arg Ala Gln Asp
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Phe Val Lys Trp Leu Xaa Asn Thr
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<210> 1317
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Phe Val Cys Trp Leu Xaa Asn Thr
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Phe Val Gln Trp Leu Xaa Asn Thr
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Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
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<223> Peptide fragment representing the carboxy terminal 8 amino acids of oxyntomodulin

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Lys Arg Asn Arg Asn Asn Ile Ala
1 5

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<223> Peptide fragment representing the carboxy 4 amino acids of oxyntomodulin carboxy terminus

<400> 1321

Lys Arg Asn Arg
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<210> 1322
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Phe Val Xaa Trp Leu Met Asn Thr
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Phe Val Gln Trp Leu Xaa Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

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Phe Val Xaa Trp Leu Xaa Asn Thr Lys Arg Asn Arg Asn Asn Ile Ala
20 25 30

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<400> 1325

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Phe Val Xaa Trp Leu Xaa Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1326
<211> 32
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<220>
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<400> 1326

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Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn Arg Asn Asn Ile Ala
20 25 30

<210> 1327
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<222> (22)..(22)
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<400> 1327

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1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn Arg
20 25

<210> 1328
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<400> 1328

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1 5 10 15

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20 25

<210> 1329
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<222> (22)..(22)
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<400> 1329

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Phe Val Gln Trp Leu Xaa Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1330
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<212> PRT
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<220>
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<223> Xaa is Met, Leu or Nle

<400> 1330

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Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn Arg Asn Asn Ile Ala
20 25 30

<210> 1331
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<223> Xaa is Met, Leu or Nle

<400> 1331

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Cys
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn Arg
20 25

<210> 1332
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1332

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Cys Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1333
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1333

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1334
<211> 29
<212> PRT
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<220>
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<220>
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<223> Glucagon analogue

<220>
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<222> (24)..(24)
<223> 2-butyrolactone bound through thiol group of Cysteine

<400> 1334

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Cys Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1335
<211> 29
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon Analogue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Carboxymethyl group bound through thiol group of Cysteine

<400> 1335

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Cys Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1336
<211> 24
<212> PRT
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<220>
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<220>
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<220>
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<222> (1)..(1)

<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1336

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Glu Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1337
<211> 24
<212> PRT
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<220>
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<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1337

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1338
<211> 24
<212> PRT
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<220>
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<220>
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<220>
<221> MOD_RES
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<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1338

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Glu Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1339
<211> 24
<212> PRT
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<220>
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<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

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<223> Xaa is Met, Leu or Nle

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Asp, Glu, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa id Thr, Asp, Glu, cysteic acid or homocysteic acid

<400> 1339

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1340
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1340

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1341
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
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<223> Xaa is Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Asp or Glu

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr, glu or Asp

<400> 1341

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1342
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
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<223> Xaa is Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1342

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1343
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (11)..(11)
<223> 20kDa PEG group attached to Xaa at position 11

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1343

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Cys Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1344
<211> 24
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (16)..(16)
<223> 20kDa PEG group attached to Xaa at position 16

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1344

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Cys
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa
20

<210> 1345
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
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<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Pegylated

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1345

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Cys Trp Leu Xaa Xaa Xaa
20

<210> 1346
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (25)..(25)
<223> Xaa is Lys, Cys, Orn, homocycstein or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (25)..(25)
<223> Pegylated

<400> 1346

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa Xaa Gly Pro Ser Ser Gly Ala Pro
20 25 30

Pro Pro Ser
35

<210> 1347
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (35)..(35)
<223> Xaa is Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (35)..(35)
<223> Pegylated

<400> 1347

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Xaa
35

<210> 1348
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1348

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Arg Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1349
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
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<222> (7)..(7)
<223> Xaa is Lys or Arg

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met , Leu or Nle

<220>
<221> MISC_FEATURE
<222> (35)..(35)
<223> Xaa is Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (35)..(35)
<223> Pegylated

<400> 1349

Phe Thr Ser Xaa Tyr Ser Xaa Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Xaa
35

<210> 1350
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1350

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1351

<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1351

Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp Phe Val Gln Trp
1 5 10 15

Leu Met Asn Thr
20

<210> 1352
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is Homocysteic acid

<400> 1352

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1353
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE

<223> Peptide fragment representing the carboxy terminal 10 amino acids
of Exendin-4

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<400> 1353

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Xaa
1 5 10

<210> 1354
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<400> 1354

His Ser Gln Gly Thr Xaa
1 5

<210> 1355
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<400> 1355

Ser Gln Gly Thr Xaa
1 5

<210> 1356
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is phenyl lactic acid

<400> 1356

Gln Gly Thr Xaa
1

<210> 1357
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is phenyl lactic acid

<400> 1357

Gly Thr Xaa
1

<210> 1358
<211> 2
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is phenyl lactic acid

<400> 1358

Thr Xaa
1

<210> 1359
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of His, D-histidine, alpha, alpha-dimethyl imidiazole acetic acid (DMIA), N-methyl histidine, alpha-methyl histidine, imidazole acetic acid, desaminohistidine, hydroxyl-histidine, acetyl-histidine and

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is selected from a group consisting of Glu or Gln

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<400> 1359

Xaa Xaa Xaa Gly Thr Xaa
1 5

<210> 1360
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Glu or Gln

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<400> 1360

Xaa Xaa Gly Thr Xaa

1 5

<210> 1361
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of Glu and Gln

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is phenyl lactic acid

<400> 1361

Xaa Gly Thr Xaa
1

<210> 1362
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate optionally replaced with amide

<400> 1362

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1363
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate optionally replaced with amide

<400> 1363

Ser Gln Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg
1 5 10 15

Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1364
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (4)..(5)
<223> Threonine in position 4 and phenyl lactic acid in position 5
linked via ester bond

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<220>
<221> MOD_RES
<222> (28)..(28)
<223> Optional C-terminal alpha carboxylate replaced with amide

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate optionally replaced with amide

<400> 1364

Ser Gln Gly Thr Xaa Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg
1 5 10 15

Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1365

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (5)..(6)
<223> Threonine in position 5 and phenyl lactic acid in position 6 linked via ester bond

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal alpha carboxylate optionally replaced with amide

<400> 1365

His Ser Gln Gly Thr Xaa Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1366
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (11)..(11)
<223> Xaa is amino isobutyric acid

<400> 1366

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1367
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<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1367

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1368
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of His, D-histidine, alpha, alpha-dimethyl imidiazole acetic acid (DMIA), N-methyl histidine, alpha-methyl histidine, imidazole acetic acid, desaminohistidine, hydroxyl-histidine, acetyl-histidine and

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is selected from a group consisting of Glu or Gln

<400> 1368

Xaa Xaa Xaa Thr Gly Phe
1 5

<210> 1369
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Glu or Gln

<400> 1369

Xaa Xaa Thr Gly Phe
1 5

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<211> 4
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<220>
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<222> (1)..(1)
<223> Xaa is selected from a group consisting of Glu or Gln

<400> 1370

Xaa Thr Gly Phe
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<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> C-terminal alpha carboxylate optionally replaced with an amide

<400> 1371

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1372

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<210> 1401
<211> 29
<212> PRT
<213> Homo sapiens

<400> 1401

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1402
<211> 24
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<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1402

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1403
<211> 31
<212> PRT
<213> Homo sapiens

<400> 1403

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
20 25 30

<210> 1404
<211> 30
<212> PRT
<213> Homo sapiens

<400> 1404

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 1405
<211> 24
<212> PRT
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<220>
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<220>
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<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1405

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1406
<211> 24
<212> PRT
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<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1406

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1407
<211> 24
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (11)..(11)
<223> Xaa is Ser or Glu

<400> 1407

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Glu Trp Leu Met Asn Thr
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<210> 1408
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<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Ser or Glu

<400> 1408

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Glu Trp Leu Met Lys Thr
20

<210> 1409
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa at position 7 is Lys or Glu

<220>
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<222> (10)..(10)
<223> Xaa is Asp, Glu, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Ala, Ser, Glu, Lys, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Gln, Glu or Lys

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Xaa is Ala, Gln, Lys or Glu

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Lys or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1409

Phe Thr Ser Asp Tyr Ser Xaa Tyr Leu Xaa Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Xaa Trp Leu Met Xaa Xaa
20

<210> 1410
<211> 24
<212> PRT
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<220>
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<222> (11)..(11)
<223> Xaa is Ala, Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
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<222> (15)..(15)
<223> Xaa is Gln or Lys

<220>
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<222> (19)..(19)
<223> Xaa is Ala, Gln or Glu

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Lys or an acidic amino acid

<400> 1410

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Xaa Trp Leu Met Xaa Thr
20

<210> 1411
<211> 24
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (11)..(11)
<223> Xaa is Ala, Ser, Glu, Gln, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE

<222> (15)..(15)
<223> Xaa is Gln or Lys

<400> 1411

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1412
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Lys or Arg

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Lys or Gln

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> Xaa is Lys, Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Pegylated

<220>
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<222> (19)..(19)
<223> Xaa is Lys, Cys, Orn, homocysteine or acetyl phenylalanine

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Pegylated

<220>
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1412

Phe Thr Ser Xaa Tyr Ser Xaa Tyr Leu Asp Glu Arg Arg Ala Xaa Xaa
1 5 10 15

Phe Val Xaa Trp Leu Xaa Asn Thr
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<210> 1413
<211> 24
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

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<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
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<223> Xaa is Lys or Gln

<220>
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<223> Xaa is Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Pegylated

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<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1413

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Xaa Xaa
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
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<210> 1414
<211> 24
<212> PRT
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

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<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Lys or Gln

<220>
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<222> (19)..(19)
<223> Xaa is Cys, Orn, homocysteine or acetyl phenylalanine

<220>
<221> MOD_RES
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1414

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Xaa Asp

1 5 10 15

Phe Val Xaa Trp Leu Xaa Asn Thr
20

<210> 1415
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Lys or Glu

<220>
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<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
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<223> Xaa is Arg, Gln, Glu or Lys

<220>
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<222> (19)..(19)
<223> Xaa is Ala, Gln, Lys or Glu

<220>
<221> MISC_FEATURE
<222> (22)..(22)

<223> Xaa is Met, Leu or Nle

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Lys or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr or an acidic amino acid

<400> 1415

Phe Thr Ser Xaa Tyr Ser Xaa Tyr Leu Xaa Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Xaa Trp Leu Xaa Xaa Xaa
20

<210> 1416
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
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<222> (10)..(10)
<223> Xaa is Glu or Asp

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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Asp or Glu

<220>

<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1416

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Thr
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<210> 1417
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<212> PRT
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<223> N-terminal amino group replaced with hydroxy group

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<222> (10)..(10)
<223> Xaa is Asp or Glu

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<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Asp or Glu

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1417

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Thr
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<210> 1418
<211> 24
<212> PRT
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

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<222> (10)..(10)
<223> Xaa is Asp or Glu

<220>
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<222> (11)..(11)
<223> Xaa is Ser or Glu

<220>
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<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
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<223> Xaa is Asn, Asp or Glu

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1418

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Glu Trp Leu Xaa Xaa Thr

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<210> 1419
<211> 24
<212> PRT
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<220>
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<220>
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<223> N-terminal amino group replaced with hydroxy group

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<222> (10)..(10)
<223> Xaa is Asp or Glu

<220>
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<222> (11)..(11)
<223> Xaa is Ser or Glu

<220>
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<222> (19)..(23)
<223> Lactam bridge connecting residues 19 and 23

<220>
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
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<222> (24)..(24)
<223> Xaa is Thr or Glu

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1419

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Xaa Xaa Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Glu Trp Leu Xaa Lys Xaa
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<210> 1420
<211> 24
<212> PRT
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<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Lys or Glu

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
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<222> (11)..(11)
<223> Xaa is Ala, Ser, Glu, Lys Gln, homoglutamic acid or homocysteine

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Arg, Gln, Glu or Lys

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Xaa is Ala, Gln, Lys or Glu

<220>
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<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
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<222> (23)..(23)
<223> Xaa is Asn, Lys, Asp, Glu, cysteic acid or homocysteic acid

<220>

<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr, Asp, Glu, cysteic acid and homocysteic acid

<400> 1420

Phe Thr Ser Xaa Tyr Ser Xaa Tyr Leu Xaa Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Xaa Trp Leu Xaa Xaa Xaa
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<210> 1421
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<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4

<400> 1421

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5 10

<210> 1422
<211> 24
<212> PRT
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<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(11)

<223> Lactam bridge connecting residues 7 and 11

<220>
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<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1422

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1423
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<212> PRT
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<220>
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<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (22)..(22)

<223> Xaa is Met, Leu or Nle

<400> 1423

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1424
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1424

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Glu Trp Leu Xaa Asn Thr
20

<210> 1425
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
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<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (19)..(24)
<223> Lactam bridge connecting residues 19 and 24

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<400> 1425

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Glu Trp Leu Xaa Lys Thr
20

<210> 1426
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>

<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy terminal 8 amino acids of oxyntomodulin

<400> 1426

Lys Arg Asn Arg Asn Asn Ile Ala
1 5

<210> 1427
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy 4 amino acids of oxyntomodulin carboxy terminus

<400> 1427

Lys Arg Asn Arg
1

<210> 1428
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1428

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1429
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<400> 1429

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1430
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<400> 1430

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1431
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<400> 1431

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1432
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<400> 1432

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1433
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<400> 1433

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1434
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<400> 1434

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp

1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1435
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<400> 1435

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1436
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)

<223> Lactam bridge connecting residues 11 and 15

<400> 1436

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1437
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1437

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ala Arg Tyr Leu Asp Ala
1 5 10 15

Arg Arg Ala Arg Glu Phe Ile Lys Trp Leu Val Arg Gly Arg Gly
20 25 30

<210> 1438
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1438

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp

1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1439
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1439

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Asn Thr
20

<210> 1440
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1440

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Cys Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1441
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon Analogue

<400> 1441

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1442
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES

<222> (24)..(24)
<223> 2-butyrolactone bound through thiol group of Cysteine

<400> 1442

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Cys Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1443
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon Analogue

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Carboxymethyl group bound through thiol group of Cysteine

<400> 1443

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Cys Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1444
<211> 39
<212> PRT
<213> Homo sapiens

<400> 1444

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Arg Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Arg Asn Thr Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 1445

<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Lys, Asp, Glu, cysteic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr, Asp, Glu, cysteic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (25)..(25)
<223> Xaa is Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (25)..(25)
<223> Pegylated

<400> 1445

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa Xaa Gly Pro Ser Ser Gly Ala Pro
20 25 30

Pro Pro Ser
35

<210> 1446
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Lys, Asp, Glu, cysteic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr, Asp, Glu, cysteic acid and homocysteic acid

<220>
<221> MISC_FEATURE
<222> (35)..(35)
<223> Xaa is Cys, Orn, homocysteine or acetyl phenyalanine

<220>
<221> MOD_RES
<222> (35)..(35)
<223> Pegylated

<400> 1446

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Xaa Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Xaa
35

<210> 1447
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is glutamic acid, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Glu or Asp

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE

<222> (23)..(23)
<223> Xaa is Asn, Asp or Glu

<400> 1447

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Thr
20

<210> 1448
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is glutamic acid, homoglutamic acid, cysteic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp or Glu

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Asp or Glu

<400> 1448

Phe Thr Ser Xaa Tyr Ser Lys Tyr Leu Xaa Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Xaa Xaa Thr
20

<210> 1449
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Glucagon analogue

<400> 1449

Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp Phe
1 5 10 15

Val Gln Trp Leu Met Asp Thr
20

<210> 1450
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<223> Peptide fragment representing the carboxy terminal 10 amino acids of Exendin-4 plus one additional amino acid

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is selected form the group consisting of Cys, Orn, Lys, homocysteine and acetyl phenyalanine

<400> 1450

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Xaa
1 5 10

<210> 1451
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE

<223> Glucagon analogue

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is aspartic acid, glutamic acid, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is Lys or Glu

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa is Asp, Glu, cysteic acid, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is Ala, Ser, Glu, Lys Gln, homoglutamic acid or homocysteic acid

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Arg, Gln, Glu or Lys

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Xaa is Ala, Gln, Lys or Glu

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> Xaa is Met, Leu or Nle

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> Xaa is Asn, Lys or an acidic amino acid

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Xaa is Thr, Gly or an acidic amino acid

<400> 1451

Phe Thr Ser Xaa Tyr Ser Xaa Tyr Leu Xaa Xaa Arg Arg Ala Xaa Asp
1 5 10 15

Phe Val Xaa Trp Leu Xaa Xaa Xaa
20

<210> 1452
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<400> 1452

His Ser Gln Gly Thr Xaa
1 5

<210> 1453
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<400> 1453

Ser Gln Gly Thr Xaa
1 5

<210> 1454
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is phenyl lactic acid

<400> 1454

Gln Gly Thr Xaa

1

<210> 1455
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is phenyl lactic acid

<400> 1455

Gly Thr Xaa
1

<210> 1456
<211> 2
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is phenyl lactic acid

<400> 1456

Thr Xaa
1

<210> 1457
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of His, D-histidine, alpha, alpha-dimethyl imidiazole acetic acid (DMIA), N-methyl histidine, alpha-methyl histidine, imidazole acetic acid, desaminohistidine, hydroxyl-histidine, acetyl-histidine and

<220>

<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa is selected from a group consisting of Glu or Gln

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<400> 1457

Xaa Xaa Xaa Gly Thr Xaa
1 5

<210> 1458
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, Val, Gly, N-methyl serine, N-methyl alanine, and aminoisobutyric acid (AIB)

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is selected from a group consisting of Glu or Gln

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<400> 1458

Xaa Xaa Gly Thr Xaa
1 5

<210> 1459
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is selected from a group consisting of Glu or Gln

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is phenyl lactic acid

<400> 1459

Xaa Gly Thr Xaa
1

<210> 1460
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1460

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1461
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1461

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1462
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
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<222> (4)..(7)
<223> Lactam bridge connecting residues 4 and 7

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1462

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
20

<210> 1463
<211> 28
<212> PRT
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<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1463

Ala Glu Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1464
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (4)..(5)
<223> Threonine in position 4 and phenyl lactic acid in position 5 are linked via ester bond

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1464

Ala Glu Gly Thr Xaa Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1465
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1465

Ser Gln Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1466
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Threonine in position 4 and phenyl lactic acid in position 5 are linked via ester bond

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1466

Ser Gln Gly Thr Xaa Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1467
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Covalently linked to a cholesterol acid moiety

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 to 15

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1467

Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1468
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (25)..(25)
<223> Covalently linked to a cholesterol acid moiety

<220>
<221> MOD_RES
<222> (25)..(25)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1468

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr Lys
20 25

<210> 1469
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connectiong residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (35)..(35)
<223> Covalently linked to a cholesterol acid moiety

<220>
<221> MOD_RES
<222> (35)..(35)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1469

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Lys
35

<210> 1470
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is amino isobutyric acid

<220>
<221> MISC_FEATURE
<222> (4)..(5)
<223> Threonine in position 4 and phenyl lactic acid in position 5 are linked via ester bond

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is phenyl lactic acid

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connectiong residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1470

Xaa Glu Gly Thr Xaa Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1471
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (34)..(34)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1471

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1472
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (34)..(34)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1472

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1473
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (34)..(34)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1473

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1474
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (34)..(34)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1474

Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser

<210> 1475
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1475

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1476
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1476

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1477
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1477

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Glu Trp Leu Met Asp Thr
20

<210> 1478
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (19)..(23)
<223> Lactam bridge connecting residues 19 and 23

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1478

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Glu Trp Leu Met Lys Thr
20

<210> 1479
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1479

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Gln Ala Ala Lys Asp
1 5 10 15

Phe Ile Ala Trp Leu Met Asp Thr
20

<210> 1480
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1480

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Gln Ala Ala Lys Glu
1 5 10 15

Phe Ile Ala Trp Leu Met Asp Thr
20

<210> 1481
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1481

Ala Glu Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1482
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1482

Ala Glu Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Gln
1 5 10 15

Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 1483
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
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<222> (16)..(20)
<223> Lactam bridge connection residues 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1483

His Ala Glu Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1484
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (16)..(20)

<223> Lactam bridge connecting bridges 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1484

His Ala Glu Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Met Asp Thr
20 25

<210> 1485
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (13)..(17)
<223> Lactam bridge connecting residues 13 and 17

<220>
<221> MOD_RES
<222> (26)..(26)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1485

Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala
1 5 10 15

Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1486
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (5)..(6)
<223> Threonine in position 5 and phenyl lactic acid in position 6
linked via ester bond

<220>
<221> MISC_FEATURE
<222> (15)..(19)
<223> Lactam bridge connecting residues 15 and 19

<220>
<221> MOD_RES
<222> (28)..(28)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1486

Ser Gln Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Glu Arg
1 5 10 15

Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1487
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MISC_FEATURE
<222> (5)..(6)
<223> Threonine at position 5 and phenyl lactic acid at position 6
linked via ester bond

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is phenyl lactic acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge connecting residues 16 and 20

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1487

His Ala Glu Gly Thr Xaa Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1488

<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Pegylated

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1488

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Cys Trp Leu Met Asp Thr
20

<210> 1489
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (7)..(11)
<223> Lactam bridge connecting residues 7 and 11

<220>
<221> MOD_RES
<222> (35)..(35)
<223> Pegylated

<220>
<221> MOD_RES
<222> (35)..(35)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1489

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Cys
35

<210> 1490
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Pegylated

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1490

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Cys Trp Leu Met Asp Thr
20

<210> 1491
<211> 35

<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MOD_RES
<222> (35)..(35)
<223> Pegylated

<220>
<221> MOD_RES
<222> (35)..(35)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1491

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr Gly Pro Ser Ser Gly Ala Pro Pro
20 25 30

Pro Ser Cys
35

<210> 1492
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Covalently attached to a C16 fatty acid

<220>

<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connection residues 11 and 15

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1492

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1493
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Linked to a C16 fatty acid via Glu residue

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Linked to a C16 fatty acid via Glu residue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1493

Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1494
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Linked to C16 fatty acid via Glu residue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1494

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Thr
20

<210> 1495
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> Linked to a C16 fatty acid via Glu residue

<220>

<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1495

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Lys Trp Leu Met Asp Thr
20

<210> 1496
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(15)
<223> Lactam bridge connecting residues 11 and 15

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> Linked to a C16 fatty acid via Glu residue

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1496

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu Arg Arg Ala Lys Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asp Lys
20

<210> 1497
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Polypeptide

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminal amino group replaced with hydroxy group

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is amino isobutyric acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> C-terminal alpha carboxylate replaced with amide

<400> 1497

Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa Arg Arg Ala Gln Asp
1 5 10 15

Phe Val Gln Trp Leu Met Asn Thr
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<210> 1498
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Phe Val Gln Trp Leu Met Asn Thr
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Phe Val Cys Trp Leu Met Asn Thr
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Phe Val Gln Trp Leu Met Asn Thr
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Phe Val Gln Trp Leu Met Asp Thr
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Pro Ser

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<222> (7)..(7)
<223> Linked to a C16 fatty acid via Glu residue

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Phe Val Gln Trp Leu Met Asp Thr
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<223> Xaa is selected from a group consisting of Ser, D-serine, D-alanine, valine, glycine, N-methyl serine, and aminoisobutyric acid (AIB)

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Ser Gln Gly Thr Phe Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser Arg
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Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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linked via ester bond

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<222> (28)..(28)
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1 5 10 15

Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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<222> (6)..(6)
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His Ser Gln Gly Thr Xaa Thr Ser Glu Tyr Ser Lys Tyr Leu Asp Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
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Phe Val Cys Trp Leu Met Asn Thr
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Phe Val Lys Trp Leu Met Asp Thr
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Phe Val Lys Trp Leu Met Asp Thr
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<223> Xaa can be any naturally occurring amino acid

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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Gln Ala Ala Xaa Gly Phe Ile Ala Trp Leu Met Asn Thr
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<223> Xaa is AIB

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His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

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1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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His Xaa Glu Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr

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His Xaa Gln Gly Thr Phe Ile Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Glu Xaa
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Leu Asp Thr
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His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Gln Trp Leu Leu Asp Thr Cys
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Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
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His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Gly Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Gly Gly
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Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
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Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Leu Asp Thr Cys
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His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
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Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Glu
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His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Cys
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<210> 1727
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Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
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Glu Ala Val Arg Leu Phe Ile Cys Trp Leu Met Asn Thr
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Glu Ala Val Arg Leu Phe Ile Cys Trp Leu Met Asn Thr
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Glu Ala Val Arg Leu Phe Ile Cys Trp Leu Met Asn Thr
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
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His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
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His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
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<400> 1741

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1742
<211> 29
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<223> d-Ser

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<223> PEGYLATION

<220>
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<223> C-terminal amidation

<400> 1742

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1743
<211> 29
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<223> Xaa is AIB

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<223> Salt bridge

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<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
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<223> C-terminal amidation

<400> 1743

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1744
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<223> d-Ser

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<223> C-terminal amidation

<400> 1744

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1745
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<212> PRT
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<222> (16)..(16)
<223> Xaa is AIB

<220>
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<223> Salt bridge

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<223> Salt bridge

<220>
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<222> (29)..(29)
<223> C-terminal amidation

<400> 1745

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1746
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<212> PRT
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

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<223> Acylated with C16 fatty acyl group via gamma-Glu spacer

<220>
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<222> (15)..(20)
<223> Salt bridge

<220>
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<222> (16)..(16)
<223> Xaa is AIB

<220>
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<222> (16)..(21)
<223> Salt bridge

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1746

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1747
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<220>
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<223> Xaa is AIB

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<223> Salt bridge

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<223> Salt bridge

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1747

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1748
<211> 29
<212> PRT
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<220>
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<223> Salt bridge

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<223> Salt bridge

<220>
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<222> (29)..(29)
<223> C-terminal amidation

<400> 1748

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1749
<211> 29
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<220>
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<220>
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via dipeptide spacer

<220>
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<222> (16)..(16)
<223> Xaa is AIB

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1749

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr
20 25

<210> 1750
<211> 29
<212> PRT
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<220>
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<223> Xaa is AIB

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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1750

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1751
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<223> Xaa is AIB

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1751

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1752
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<223> Xaa is AIB

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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
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<222> (29)..(29)
<223> C-terminal amidation

<400> 1752

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
20 25

<210> 1753
<211> 30
<212> PRT
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<220>
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<222> (2)..(2)
<223> Xaa is AIB

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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<223> PEGYLATION

<220>
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<222> (30)..(30)
<223> C-terminal amidation

<400> 1753

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Gln Trp Leu Leu Asp Thr Cys
20 25 30

<210> 1754

<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1754

His Ala Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
20 25

<210> 1755
<211> 29
<212> PRT
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<220>
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N-methyl serine, aminoisobutyric acid

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<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1755

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu

1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1756
<211> 29
<212> PRT
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

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<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
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<223> C-terminal amidation

<400> 1756

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Leu Asp Thr
20 25

<210> 1757
<211> 29
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1757

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
20 25

<210> 1758
<211> 29
<212> PRT
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<220>
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<400> 1758

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1759
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1759

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Gly Glu
20 25 30

<210> 1760
<211> 31
<212> PRT
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<220>
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<223> PEGYLATION

<400> 1760

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Gly Gly
20 25 30

<210> 1761
<211> 29
<212> PRT
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<223> Synthetic peptide

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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
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<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<222> (24)..(24)
<223> PEGYLATION

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<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1761

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Cys Trp Leu Leu Asp Thr
20 25

<210> 1762
<211> 30
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N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<223> PEGYLATION

<220>
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<222> (30)..(30)
<223> C-terminal amidation

<400> 1762

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Leu Asp Thr Cys
20 25 30

<210> 1763
<211> 30
<212> PRT
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<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1763

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Glu
20 25 30

<210> 1764
<211> 30
<212> PRT
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<220>
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<220>
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<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (24)..(24)
<223> PEGYLATION

<400> 1764

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr Cys
20 25 30

<210> 1765
<211> 29
<212> PRT
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1765

Xaa Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1766
<211> 29
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<220>
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<223> des-amino-His

<220>
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<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1766

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1767
<211> 29
<212> PRT
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<220>
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<223> Ac-His

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)

<223> C-terminal amidation

<400> 1767

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Cys Trp Leu Leu Asp Thr
20 25

<210> 1768
<211> 29
<212> PRT
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<220>
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<220>
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<222> (2)..(2)
<223> Xaa is AIB

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1768

His Xaa Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
20 25

<210> 1769
<211> 29
<212> PRT
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<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1769

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 1770
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1770

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
20 25

<210> 1771
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES

<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1771

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Cys Trp Leu Met Asn Thr
20 25

<210> 1772
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1772

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Met Asn Thr
20 25

<210> 1773
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,

N-methyl serine, aminoisobutyric acid

<220>
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<222> (16)..(20)
<223> Salt bridge

<220>
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<222> (17)..(21)
<223> Salt bridge

<220>
<221> MOD_RES
<222> (24)..(24)
<223> PEGYLATION

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1773

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1774
<211> 29
<212> PRT
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<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine,
N-methyl serine, aminoisobutyric acid

<220>
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<222> (16)..(16)
<223> Xaa is AIB

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Salt bridge

<220>
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<222> (17)..(21)
<223> Salt bridge

<220>
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<222> (24)..(24)
<223> PEGYLATION

<220>
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<222> (29)..(29)
<223> C-terminal amidation

<400> 1774

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Cys Trp Leu Met Asn Thr
20 25

<210> 1775
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Salt bridge

<220>
<221> MISC_FEATURE
<222> (17)..(21)
<223> Salt bridge

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1775

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1776
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(2)
<223> D-serine, D-alanine, valine, amino n-butyric acid, glycine, N-methyl serine, aminoisobutyric acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Acylated with C16 fatty acyl group via acidic amino acid spacer

<220>
<221> MISC_FEATURE
<222> (15)..(20)
<223> Salt bridge

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa is AIB

<220>
<221> MISC_FEATURE
<222> (16)..(21)
<223> Salt bridge

<220>
<221> MOD_RES
<222> (29)..(29)
<223> C-terminal amidation

<400> 1776

His Ser Gln Gly Thr Phe Thr Ser Asp Lys Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 1777

<400> 1777
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<210> 1778

<400> 1778
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<210> 1779

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<210> 1780

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<210> 1797

<400> 1797
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<210> 1798

<400> 1798
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<210> 1799

<400> 1799
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<210> 1800

<400> 1800
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<210> 1801
<211> 37
<212> PRT
<213> Homo sapiens

<400> 1801

His Ser Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1802
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<400> 1802

His Ser Glu Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1803
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<400> 1803

His Ser Asp Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1804
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa=Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1804

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Cys
35

<210> 1805
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)5kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1805

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1806

<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)20kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1806

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1807
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)2 40kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1807

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1808
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(9cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)
-3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1808

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1809
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aminoisobutyric acid

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)5kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1809

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1810
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=aminoisobutyric acid

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)20kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1810

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn

20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1811
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> X=aminoisobutyric acid

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)2 40kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1811

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1812
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=aminoisobutyric acid

<220>
<221> MOD_RES

<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1812

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1813
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=aminoisobutyric acid

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=methionine sulfoxide

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1813

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1814
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=methionine sulfoxide

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)260kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1814

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1815
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1815

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1816
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1816

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Xaa Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1817
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=metionine sulfoxide

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1817

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Xaa Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1818
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES

<222> (28)..(28)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1818

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Xaa Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1819
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Lys(palmitoyl)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1819

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1820

<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Xaa=desamino-His (deltaNH2-H)

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=mrtionine sulfoxide

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1820

Xaa Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1821
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1821

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1822
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=methionine sulfoxide

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1822

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Xaa Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1823
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Xaa=Cys(mPEG)240kDa

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=Methionine sulfoxide

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1823

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Xaa Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1824
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Lys(palmitoyl)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1824

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1825
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=Nle

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1825

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Cys
35

<210> 1826
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=O-methyl-L-homoserine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1826

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Cys
35

<210> 1827
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)

<223> Xaa=Nle

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1827

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1828
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=O-methyl-L-homoserine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1828

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1829
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1829

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1830
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1830

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Cys
35

<210> 1831
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=metionine sulfoxide

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1831

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1832
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=methionine sulfoxide

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(CH2CONH2)

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1832

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1833
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclohexane carboxylic acid

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1833

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1834
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Abu

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1834

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1835
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-abu

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1835

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1836
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Nva (Aminovaleric acid)

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1836

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1837
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa= beta-cyclopropyl-alanine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1837

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1838
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=propargylglycine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1838

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1839
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Allylglycine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1839

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1840
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=2-Amino-2-cyclohexyl-propanoic acid

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1840

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1841
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-tertbutylglycine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1841

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1842
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Vinylglycine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1842

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1843
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclopropane carboxylic acid

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1843

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1844
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclobutane carboxylic acid

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1844

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1845
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclopentane carboxylic acid

<220>
<221> MOD_RES
<222> (37)..(37)
<223> C-terminal amidation

<400> 1845

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1846
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1846

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Cys
35

<210> 1847
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1847

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Cys
20 25 30

<210> 1848
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1848

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Cys
20 25 30

<210> 1849
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1849

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Cys
20 25 30

<210> 1850
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1850

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Cys
20 25 30

<210> 1851
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (38)..(38)
<223> C-terminal amidation

<400> 1851

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1852

<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1852

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1853
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> X=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)

<223> C-terminal amidation

<400> 1853

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1854
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1854

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1855
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1855

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1856
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Lys(Palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1856

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1857
<211> 31

<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Lys(palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1857

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1858
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Ttds

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Lys(Palmitoyl)

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1858

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1859
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Ttds

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Lys(Palmitoyl)

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1859

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1860
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1860

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1861
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1861

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser

1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1862
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa= Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1862

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1863
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)

<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<220>
<221> MOD_RES
<222> (39)..(39)
<223> C-terminal amidation

<400> 1863

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa Xaa
35

<210> 1864
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1864

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Xaa

20 25 30

<210> 1865
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<400> 1865

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa
35

<210> 1866
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol))

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1866

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1867
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<400> 1867

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1868
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (38)..(38)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Xaa=Lys(Palmitoyl)

<220>
<221> MOD_RES
<222> (39)..(39)
<223> C-terminal amidation

<400> 1868

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Glu Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala Xaa Xaa
35

<210> 1869
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=Cys(cholest-5-en-3-yl{[(2R)-3-amino-2-(amino)-
3-oxopropyl]thio}acetate)

<400> 1869

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1870
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}acetate )

<400> 1870

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ser Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1871
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES

<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}acetate );

<400> 1871

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1872
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1872

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Ser Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1873
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1873

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1874
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}acetate )

<400> 1874

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1875
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1875

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1876
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1876

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1877
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-{1-[46-(cholest-5-en-3-yloxy)-3,43,46-trioxo
-7,10,13,16,19,22,25,28,31,34,37,40-dodecaoxa-4,44
-diazahexatetracont-1-yl]-2,5-dioxopyrrolidin-3-yl }-L-cysteine
or Cys (mal-oxa12-cholesterol)

<400> 1877

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1878
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa== Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1878

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1879
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclobutane carboxylic acid

<220>
<221> MOD_RES
<222> (31)..(32)

<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=Cys(cholest-5-en-3-yl
1-{[(2R)-3-amino-2-(amino)-3-oxopropyl]thio}-2-oxo
-6,9,12,15-tetraoxa-3-azaoctadecan-18-oate]) or
Cys(Oxa4-cholesterol)

<400> 1879

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1880
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between side chains

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1880

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1881
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between side chains

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1881

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1882
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclobutane carboxylic acid

<220>
<221> MISC_FEATURE
<222> (16)..(20)
<223> Lactam bridge between side chains

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1882

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Lys Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1883
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra

cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1883

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1884
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1884

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1885
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=1-Amino-1-cyclobutane carboxylic acid

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<400> 1885

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1886
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=Lys(gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES

<222> (33)..(33)
<223> C-terminal amidation

<400> 1886

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1887
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<220>
<221> MOD_RES
<222> (33)..(33)
<223> C-terminal amidation

<400> 1887

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1888
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Lys(gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1888

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1889
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES

<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1889

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1890
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1890

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1891
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1891

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Xaa Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1892
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1892

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1893
<211> 33

<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[78-(cholest-5-en-3-yloxy)-2,78-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,6
3,66,69,72,75-tetracosaoxa-3-azaoctaheptacont-1-yl ]-L-cysteine
or Cys (oxa24-cholesterol)

<400> 1893

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1894
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Xaa=Lys(DOTA)

<220>
<221> MOD_RES
<222> (27)..(27)

<223> Xaa=methionine sulfoxide

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[42-(cholest-5-en-3-yloxy)-2,42-dioxo-6,9,12
,15,18,21,24,27,30,33,36,39-dodecaoxa-3-azadotetra
cont-1-yl]-L-cysteine or Cys (oxa12-cholesterol)

<220>
<221> MOD_RES
<222> (33)..(33)
<223> C-terminal amidation

<400> 1894

His Xaa Asp Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Xaa Trp Leu Xaa Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1895
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1895

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1896
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> C-terminal amidation

<400> 1896

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

<210> 1897
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1897

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1898
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=acb

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl

<220>
<221> MOD_RES
<222> (30)..(30)
<223> C-terminal amidation

<400> 1898

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1899
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1899

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1900
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES

<222> (33)..(33)
<223> Xaa=Lys(gamma glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (33)..(33)
<223> C-terminal amidation

<400> 1900

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1901
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=acb

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=Lys(gamma glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (33)..(33)
<223> C-terminal amidation

<400> 1901

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1902
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (31)..(32)
<223> Xaa=gamma glutamic acid

<220>
<221> MOD_RES
<222> (33)..(33)
<223> Xaa=S-[38-(cholest-5-en-3-yloxy)-2-oxo-6,9,12,15,1
8,21,24,27,30,33,36-undecaoxa-3-azaoctatriacont-1- yl]-L-cysteine
or Cys (oxa12-O-cholesterol)

<400> 1902

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa Xaa
20 25 30

Xaa

<210> 1903
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> VARIANT
<222> (2)..(2)
<223> Xaa=D-serine or Aib;

<220>
<221> VARIANT
<222> (17)..(17)

<223> Xaa=Arg or Glu

<220>
<221> VARIANT
<222> (18)..(18)
<223> Xaa=Arg or Ala

<220>
<221> VARIANT
<222> (27)..(27)
<223> Xaa=methionine, norleucine, or O-methyl-L-homoserine

<400> 1903

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Xaa Xaa Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys
20 25 30

<210> 1904
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM peptide

<400> 1904

Arg Asn Arg Asn Asn Ile Ala
1 5

<210> 1905
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> VARIANT
<222> (2)..(2)
<223> Xaa=D-serine; Aib; Acb; 1-Amino-1-cyclohexane carboxylic acid (Acx); alpha-aminobutyric acid(Abu); D- alpha-aminobutyric acid (D-Abu); Aminovaleric acid Nva); beta-cyclopropyl-alanine (Cpa); propargylglycine (Prg); Allylglycine (Alg);

<220>
<221> VARIANT
<222> (17)..(17)
<223> Xaa=Arg or Glu

<220>
<221> VARIANT
<222> (18)..(18)

<223> Xaa=Arg or Ala

<220>
<221> VARIANT
<222> (27)..(27)
<223> Xaa=methionine (M), norleucine (Nle), methionine sulfoxide (m) or
O-methyl-L-homoserine (o)

<400> 1905

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Xaa Xaa Ala Gln Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1906
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> VARIANT
<222> (2)..(2)
<223> Xaa = D-Ser, Aib, Acb, Acx, Abu, D-Abu, Aminovaleric acid
(Nva), Cpa, Prg, Alg, 2-Cha, D-tbg, Vg, Acp, or Acpe

<220>
<221> VARIANT
<222> (12)..(12)
<223> Xaa=Ser or Lys

<220>
<221> VARIANT
<222> (16)..(16)
<223> Xaa=Ser or Glu

<220>
<221> VARIANT
<222> (17)..(17)
<223> Xaa=Arg or Glu

<220>
<221> VARIANT
<222> (18)..(18)
<223> Xaa=Arg or Ala

<220>
<221> VARIANT
<222> (20)..(20)
<223> Xaa=Gln or Lys

<220>
<221> VARIANT
<222> (27)..(27)
<223> Xaa=a methionine, norleucine, methionine sulfoxide, or
O-methyl-L-homoserine

<400> 1906

His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Xaa Tyr Leu Asp Xaa
1 5 10 15

Xaa Xaa Ala Xaa Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Arg Asn
20 25 30

Arg Asn Asn Ile Ala
35

<210> 1907
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> VARIANT
<222> (2)..(2)
<223> Xaa = D-Ser, Aib, Acb, Acx, Abu, D-Abu, Aminovaleric acid
(Nva), Cpa, Prg, Alg, 2-Cha, D-tbg, Vg, Acp, or Acpe

<220>
<221> VARIANT
<222> (10)..(10)
<223> Xaa=Tyr or Lys

<220>
<221> VARIANT
<222> (12)..(12)
<223> Xaa=Ser or Lys

<220>
<221> VARIANT
<222> (16)..(16)
<223> Xaa=Ser or Glu

<220>
<221> VARIANT
<222> (17)..(17)
<223> Xaa=Arg or Glu

<220>
<221> VARIANT
<222> (18)..(18)
<223> Xaa=Arg or Ala

<220>
<221> VARIANT
<222> (20)..(20)
<223> Xaa=Gln or Lys

<220>
<221> VARIANT
<222> (27)..(27)
<223> Xaa=methionine, norleucine, methionine sulfoxide, or
O-methyl-L-homoserine

<220>
<221> VARIANT
<222> (31)..(31)
<223> Xaa=optional, but when present is one or more gamma glutamic acid
residues

<400> 1907

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Xaa Tyr Leu Asp Xaa
1 5 10 15

Xaa Xaa Ala Xaa Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Xaa
20 25 30

<210> 1908
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa = D-Ser, Aib, Acb, Acx, Abu, D-Abu, Aminovaleric acid
(Nva), Cpa, Prg, Alg, 2-Cha, D-tbg, Vg, Acp, or Acpe

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Tyr or Lys

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Xaa=Ser or Lys

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=Ser or Lys

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Xaa=Arg or Glu

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Xaa=Arg or Ala

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Gln or Lys

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=methionine, norleucine, methionine sulfoxide, or
O-methyl-L-homoserine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> optional, but when present one or more gamma glutamic acid
residues

<400> 1908

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Xaa Tyr Leu Asp Xaa
1 5 10 15

Xaa Xaa Ala Xaa Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Xaa
20 25 30

<210> 1909
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<400> 1909

His Ser Gln Gly Thr Phe Thr Ser Asp Ser Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys
20 25 30

<210> 1910
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine, Aib, Acb, Acx, Abu, D-Abu, Aminovaleric acid (Nva), Cpa, Prg, Alg, 2-Cha, D-tbg, Vg, Acp, or Acpe

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Tyr or Lys

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Xaa=Ser or Lys

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=Ser, aib, or Glu

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Xaa=Arg or Glu

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Xaa=Arg or Ala

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Xaa=Glu or Lys

<220>
<221> MOD_RES
<222> (27)..(27)
<223> Xaa=Met, norleucine, methionine sulfoxide, or O-methyl-L-homoserine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (32)..(32)
<223> Xaa=is optional but when present, it is gamma-glutamic acid

<400> 1910

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Xaa Tyr Leu Asp Xaa
1 5 10 15

Xaa Xaa Ala Xaa Asp Phe Val Gln Trp Leu Xaa Asn Thr Lys Xaa Xaa
20 25 30

<210> 1911
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=Aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1911

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Glu Xaa
20 25 30

<210> 1912
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)

<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (30)..(30)
<223> Xaa=D-Lys

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1912

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Xaa Xaa
20 25 30

<210> 1913
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1913

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1914
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-D-glutamic acid

<400> 1914

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Glu Xaa
20 25 30

<210> 1915
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(glutamic acid-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1915

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1916
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(Arg-Arg-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1916

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1917
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(homocysteic acid-homocysteic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1917

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1918
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)

<223> Xaa=Lys(D-glutamic acid-D-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1918

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Glu
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1919
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-myristoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1919

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30

<210> 1920
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-palmitoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1920

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Ala Ala Gln Asp Phe Val Gln Trp Leu Met Asp Thr Lys Xaa
20 25 30

<210> 1921
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> OXM analog

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa=D-Serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Xaa=Lys(gamma-glutamic acid-gamma-glutamic acid-stearoyl)

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Xaa=aib

<220>
<221> MOD_RES
<222> (31)..(31)
<223> Xaa=gamma-glutamic acid

<220>
<221> MOD_RES
<222> (31)..(31)
<223> C-terminal amidation

<400> 1921

His Xaa Gln Gly Thr Phe Thr Ser Asp Xaa Ser Lys Tyr Leu Asp Xaa
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Lys Xaa
20 25 30