SEQUENCE LISTING

<110> Eli Lilly and Company

<120> PROCESS FOR PREPARING A GIP/GLP1 DUAL AGONIST

<130> X22015

<150> US 62/797,963
<151> 2019-01-29

<150> US 62/815,053
<151> 2019-03-07

<150> US 62/818,342
<151> 2019-03-14

<160> 40

<170> PatentIn version 3.5

<210> 1
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is nonnaturally occurring amino acid
2-Aminoisobutyric Acid

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is nonnaturally occurring amino acid
2-Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to
the epsilon-amino group of the K side-chain with
(2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-C
O2H

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Ser at position 39 is amidated as a C-terminal primary amide

<400> 1

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 2
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Serine at position 10 is amidated as a C-terminal primary amide.

<400> 2

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

<210> 3
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> The epsilon amino group of K is modified with -CO-O-CH2-CH=CH2

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<400> 3

Asp Lys Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly
1 5 10 15

<210> 4
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected with t-Butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<400> 4

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

<210> 5
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> The lysine at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with C(O)-O-CH2-CH=CH2.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)

<223> The sidechain of tryptophan is protected by Boc.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> The sidechain od serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> Serine at position 25 is amidated as a C-terminal primary amide.

<400> 5

Asp Lys Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly
1   5   10   15

Pro Ser Ser Gly Ala Pro Pro Pro Ser
            20   25

<210> 6
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)

<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threoinine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threoinine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acic is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl
(Boc) protecting group.

<220>

<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> The lysine at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with C(O)-O-CH2-CH=CH2.

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 6

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 7
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>

<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>

<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 7

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 8
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES

<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl
(Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt)
protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to

the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 8

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 9
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Serine at position 9 is amidated as a C-terminal primary amide.

<400> 9

Pro Ser Ser Gly Ala Pro Pro Pro Ser
1 5

<210> 10
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt)

protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<400> 10

Phe Val Gln Trp Leu Ile Ala Gly Gly
1 5

<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> Lys at position 7 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<400> 11

Leu Asp Lys Ile Ala Gln Lys Ala
1 5

<210> 12
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<400> 12

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Xaa
1 5 10

<210> 13
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (12)..(12)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES

<222> (18)..(18)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Serine at position 18 is amidated as a C-terminal primary amide.

<400> 13

Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser Ser Gly Ala Pro Pro
1 5 10 15

Pro Ser

<210> 14
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> Lys at position 7 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES

<222> (11)..(11)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (12)..(12)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (26)..(26)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (26)..(26)
<223> Serine at position 26 is amidated as a C-terminal primary amide.

<400> 14

Leu Asp Lys Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly
1 5 10 15

Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser
20 25

<210> 15
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 15

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 16
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<400> 16

Phe Val Gln Trp Leu Ile Ala Gly
1 5

<210> 17
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Lys at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<400> 17

Asp Lys Ile Ala Gln Lys Ala
1 5

<210> 18
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The glycine at position 4 combines with position 5 to create
Gly-Thr (psiMe,Me-Pro) using pseudoproline.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<400> 18

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

<210> 19

<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>

<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<400> 19

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

<210> 20
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (12)..(12)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (18)..(18)

<223> Serine at position 18 is amidated as a C-terminal primary amide.

<400> 20

Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser Ser Gly Ala Pro Pro
1 5 10 15

Pro Ser

<210> 21
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Lys at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES

<222> (11)..(11)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> Serine at position 25 is amidated as a C-terminal primary amide.

<400> 21

Asp Lys Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly
1 5 10 15

Pro Ser Ser Gly Ala Pro Pro Pro Ser
20 25

<210> 22
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>

<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl
(Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 22

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser

20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 23
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)

<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> The epsilon amino group of K is modified with 5,5-dimethyl-2-(3-methylbutylidene)cyclohexane-1,3-dione

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES

<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The C-terminal serine is amidated and is bound to Sieber resin through this amine group.

<400> 23

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 24
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES

<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl
(Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The C-terminal serine is amidated and is bound to Sieber resin through this amine group.

<400> 24

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 25

<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Serine at position 10 is amidated as a C-terminal primary amide.

<400> 25

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

<210> 26
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<400> 26

Phe Val Gln Trp Leu Ile Ala Gly
1 5

<210> 27
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (4)..(4)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (12)..(12)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Serine at position 18 is amidated as a C-terminal primary amide.

<400> 27

Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser Ser Gly Ala Pro Pro
1 5 10 15

Pro Ser

<210> 28
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by Fmoc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Lys at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<400> 28

Asp Lys Ile Ala Gln Lys Ala
1 5

<210> 29
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Lys at position 6 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (18)..(18)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (19)..(19)

<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> Serine at position 25 is amidated as a C-terminal primary amide.

<400> 29

Asp Lys Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly
1   5   10   15

Pro Ser Ser Gly Ala Pro Pro Pro Ser
            20   25

<210> 30
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES
<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)

<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<400> 30

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

<210> 31
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> N-terminus is protected by (t-butyloxycarbonyl) Boc.

<220>
<221> MOD_RES

<222> (1)..(1)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Xaa at position 2 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (3)..(3)
<223> The sidechain of glutamic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (5)..(5)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (7)..(7)
<223> The sidechain of threonine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (8)..(8)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (9)..(9)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>
<221> MOD_RES
<222> (10)..(10)
<223> The sidechain of tyrosine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (11)..(11)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (13)..(13)
<223> Xaa at position 13 is 2-Aminoisobutyric Acid (Aib).

<220>
<221> MOD_RES
<222> (15)..(15)
<223> The sidechain of aspartic acid is protected by t-butyl.

<220>

<221> MOD_RES
<222> (16)..(16)
<223> The sidechain of lysine is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (19)..(19)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu(t-butyl))1-CO-(CH2)18-CO2-(t-butyl).

<220>
<221> MOD_RES
<222> (24)..(24)
<223> The sidechain of glutamine is protected by a Trityl (Trt) protecting group.

<220>
<221> MOD_RES
<222> (25)..(25)
<223> The sidechain of Tryptophan is protected by a t-butyloxycarbonyl (Boc) protecting group.

<220>
<221> MOD_RES
<222> (32)..(32)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (33)..(33)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> The sidechain of serine is protected by t-butyl.

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Serine at position 39 is amidated as a C-terminal primary amide.

<400> 31

Tyr Xaa Glu Gly Thr Phe Thr Ser Asp Tyr Ser Ile Xaa Leu Asp Lys

1 5 10 15

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 32
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (17)..(17)
<223> The C-terminal hydroxyl of Isoleucine is modified with hydrazide (N-NH2)

<400> 32

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

Ile

<210> 33
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Lys at position 3 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-CO2H

<220>
<221> MOD_RES
<222> (22)..(22)
<223> Ser at position 22 is amidated as a C-terminal primary amide

<400> 33

Cys Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser Ser
1 5 10 15

Gly Ala Pro Pro Pro Ser
20

<210> 34
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (17)..(17)
<223> The C terminal hydroxyl is modified with S-CH2-CF3

<400> 34

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

Ile

<210> 35
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-CO2H

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Ser at position 39 is amidated as a C-terminal primary amide

<400> 35

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

Ile Cys Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 36
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-CO2H

<220>
<221> MOD_RES
<222> (20)..(20)
<223> The C-terminal hydroxyl is modified with hydrazide (-N-NH2)

<400> 36

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

Ile Ala Gln Lys
20

<210> 37
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Ser at position 19 is amidated as a C-terminal primary amide

<400> 37

Cys Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser Ser Gly Ala Pro
1 5 10 15

Pro Pro Ser

<210> 38
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-CO2H

<220>
<221> MOD_RES
<222> (20)..(20)
<223> The C-terminal hydroxyl is modified with 4-mercaptophenylacetic acid

<400> 38

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

Ile Ala Gln Lys
20

<210> 39
<211> 39
<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is is nonnaturally occurring amino acid
2-Aminoisobutyric Acid

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is is nonnaturally occurring amino acid
2-Aminoisobutyric Acid

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to
the epsilon-amino group of the K side-chain with
(2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-C
O2H

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Ser at position 39 is amidated as a C-terminal primary amide

<400> 39

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

Ile Ala Gln Lys Cys Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 40
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa at position 2 is Aib

<220>
<221> MOD_RES
<222> (7)..(8)
<223> Thr at position 7 and Ser at position 8 form a depsi peptide

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa at position 13 is Aib

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Lys at position 20 is chemically modified through conjugation to the epsilon-amino group of the K side-chain with (2-[2-(2-Amino-ethoxy)-ethoxy]-acetyl)2-(gamma-Glu)1-CO-(CH2)18-CO2H

<220>
<221> MOD_RES
<222> (39)..(39)
<223> Ser at position 39 is amidated as a C-terminal primary amide

<400> 40

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

Ile Ala Gln Lys Ala Phe Val Gln Trp Leu Ile Ala Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35