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<140> EP12172010.6
<141> 2012-06-14

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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
35

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1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

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<400> 3

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1 5 10 15
Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr
20 25

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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Glu
1 5 10 15
Arg Arg Ala Gln Asp 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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lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 6
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
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<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 7
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
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<223> Serine is functionalized at the amino side chain group as Ser-NH-
CH2-CH2-SH.

<400> 8
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser

35

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<223> Ser is modified with an NH2 group

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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Serine modified with an NH2.

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

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<220>
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<223> Ser is modified with an NH2 group

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

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<220>
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<223> Ser is modified with an NH2 group

<400> 12
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg 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
        35

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<223> Ser is modified with an NH2 group

<400> 13
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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<223> Xaa is an Aib amino acid

<220>
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<222> 39
<223> Ser is modified with an NH2 group

<400> 14
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Ser is modified with an NH2 group

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

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<220>
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<223> Ser is modified with an NH2 group

<400> 16
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

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/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 17
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 18
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/organism="Artificial Sequence"

<220>
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<222> 39
<223> Ser is modified with an NH2 group

<400> 18
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Lys Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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/organism="Artificial Sequence"

<220>
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<222> 39

<223> Ser is modified with an NH2 group

<400> 19
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Lys
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-(omega-carboxypentadecanoyl))))-NH2

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

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<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(hexadecanoyl))-NH2

<400> 21
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
        35

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<220>
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<223> Ser is modified with an NH2 group

<400> 22
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Ala Ala Gln Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 23
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<220>
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<223> Xaa is a D-His

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 23
Xaa Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 24
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/organism="Artificial Sequence"

<220>
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<222> 39
<223> Ser is modified with an NH2 group

<400> 24
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser

1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<220>
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<222> 39
<223> Ser is modified with an NH2 group

<220>
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<222> 3
<223> Gln is an alpha-N-MeGln

<400> 25
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(hexadecanoyl))-NH2

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

<210> 27

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<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(omega-carboxypentadecanoyl))))-NH2

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 27
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 28
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<220>
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<222> 2
<223> Ser is a Ser(Me)

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 28
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 29
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<223> Ser is modified with an NH2 group

<220>
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<223> Xaa is a D-Ser

<400> 29
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala His Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Xaa is a D-Ser

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<223> Ser is modified with an NH2 group/

<400> 30
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Ser is modified with an NH2 group

<400> 31
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Arg Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 32
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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      /organism="Artificial Sequence"

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<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 33
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser

1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Glu Pro Pro Pro Ser
35

<210> 34
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/organism="Artificial Sequence"

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<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 34
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Glu Pro Pro Pro Ser
35

<210> 35
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 35
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 36
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<223> Ser modified as Ser-NH-CH2-CH2-S-tBu

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

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<220>
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<223> Ser is modified with an NH2 group

<400> 37
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Glu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<222> 2

<223> Xaa is a D-Ser

<220>
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<222> 14
<223> Xaa is an Aib amino acid

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<223> Ser is modified with an NH2 group

<400> 38
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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      /organism="Artificial Sequence"

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<222> 39
<223> Ser is modified with an NH2 group

<400> 39
His Ala Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ala

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 40

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 41
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 41
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 42
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<400> 42
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser

20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 43
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 43
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Phe Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 44
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 44
His Ser Gln 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
35

<210> 45
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"

/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 45
His Gly Gln 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
35

<210> 46
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 46
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp 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
35

<210> 47
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 47
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
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
35

<210> 48
<211> 39

<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 48
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Arg 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
35

<210> 49
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 49
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Arg Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 50
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser modified as Ser-NH-(CH2)5-OH

<400> 50
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 51
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 51
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 52
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid

<400> 52
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 53

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

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 53
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 54
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 54
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Gln Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 55
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 55
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu

1 5 10 15
Glu Ala Val Arg Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 56
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 56
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Gln Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 57
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 57
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Arg Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 58
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 58
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Arg Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 59
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid.

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 59
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 60
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 60

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
        35 40

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

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 61
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
        35 40

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

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid.

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 62
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
        35 40

<210> 63
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 63
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 64
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 64
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 65
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 65
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 66
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 66
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 67
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2/

<400> 67
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 68
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 68
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 69
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 69
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Lys
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 70
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 70
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Glu
1 5 10 15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 71
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>

<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 71
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 72
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 72
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 73
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES

<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<400> 73
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 74
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 74
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 75
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40

<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 75
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 76
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<400> 76
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 77
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi

lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 77
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 78
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 78
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 79
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 79
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Ala Ala Gln Leu Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser

eolf-seql
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 80
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 80
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 81
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(hexadecanoyl))-NH2

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<400> 81
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
        35

<210> 82
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..41
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 3
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 41
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 82
Gly His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu
1   5   10   15
Ser Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro
            20   25   30
Ser Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 83
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 1
<223> His is alfa-N acylated

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 83

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 84
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-Octadecanoyl)))-NH2

<400> 84
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 85
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(Octadecanoyl))-NH2

<400> 85
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 86
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-tocopheryl-succinyl)))-NH2

<400> 86
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 87
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 87
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 88
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Xaa is Orn(N-delta-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 88
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 89
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Xaa is Dab(N-gamma-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 89
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 90
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40

<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Xaa is Dap(N-beta-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 90
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Xaa
35 40

<210> 91
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 91
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Arg Leu Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 92
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2

<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 92
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Glu Gly Gly Pro Ser
20 25 30
Ser Gly Arg Pro Pro Pro Ser Lys
35 40

<210> 93
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(gamma
-Glu(N-alfa-aleuritolyl))-NH2

<400> 93
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 94
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys modified as Lys(N-alfa-aleuritolyl)-NH2

<400> 94
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 95
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Ala is a Cyclohexyl (Chx)-Ala

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 95
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 96
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Ala is a Cyclopentyl-Ala

<220>

<221> MOD_RES
<222> 14
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 96
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 97
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(gamma-Glu(N-alfa-hexadecanoyl))))-NH2

<400> 97
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 98
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(beta-Ala(N-alfa-(beta-Ala(N-alfa-hexadecanoyl)))))-NH2

<400> 98

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 99
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-aminobutyroyl(N-gamma-hexadecanoyl)))-NH2

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 99
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 100
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(beta-Ala(N-alfa-(beta-Ala(N-alfa-hexadecanoyl)))))-NH2

<400> 100
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 101
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(beta-Ala (N-alfa-hexadecanoyl)))-NH2

<400> 101
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 102
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 20
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 102
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Xaa Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 103
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 103
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 104
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 104
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Glu Gly Gly Pro Ser
20 25 30
Ser Gly Lys Pro Pro Pro Ser Lys
35 40

<210> 105
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-acetyl)-NH2

<400> 105
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 106
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-propionyl)))-NH2

<400> 106
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 107
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(6-[(4,4-diphenyl-cyclohexyloxy)-hydroxy-phosphoryloxy]-hexan
oyl)-NH2

<400> 107
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 108
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 108
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 109
<211> 40
<212> PRT
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/organism="Artificial Sequence"

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 109
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Glu Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 110
<211> 40
<212> PRT
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 110
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Lys Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 111
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<220>
<221> MOD_RES
<222> 17
<223> Xaa is an Aib amino acid

<400> 111
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Xaa Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 112
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 17
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2/

<400> 112
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Xaa Ala Ala Gln Leu Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 113
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES

<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 113
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1   5   10   15
Glu Ala Ala Lys Leu Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 114
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 114
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Glu Ala Ala Gln Leu Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 115
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 20
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 40

<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 115
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Ala Xaa Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 116
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 3
<223> Gln is an alpha N-Me-Gln

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 116
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 117
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-octadecanoyl)))-NH2

<400> 117
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 118
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys(N-epsilon-(gamma-Glu(N-alfa-tocopheryl-succinyl)))-NH2

<400> 118
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 119
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-aleuritolyl)))-NH2

<400> 119
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 120
<211> 40

<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Ala is a Cyclobutyl-Ala

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<400> 120
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 121
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(gamma-Glu(N-alfa-hexadecanoyl))))-NH2

<400> 121
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 122
<211> 39
<212> PRT

<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 122
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 123
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 20
<223> Xaa is an Aib aminoacid

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 123
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Xaa Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 124
<211> 39
<212> PRT
<213> Artificial Sequence

<220>

<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-aminobutyroyl(N-gamma-hexadecanoyl))-NH2

<400> 124
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 125
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-aminobutyroyl(N-gamma-hexadecanoyl))-NH2

<400> 125
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 126
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-cholyl)))-NH2

<400> 126
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 127
<211> 39
<212> PRT
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<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-lithocholyl)))-NH2

<400> 127
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 128
<211> 39
<212> PRT
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<220>
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>

<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-linoleoyl)))-NH2

<400> 128
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 129
<211> 39
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<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(4-dodecyclobenzoyl))))-NH2

<400> 129
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 130
<211> 39
<212> PRT
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-heneicosanoyl)))-NH2

<400> 130

His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
        35

<210> 131
<211> 39
<212> PRT
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<220>
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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-behenoyl)))-NH2

<400> 131
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
        35

<210> 132
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<222> 1..39
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-(cis-1-nonadecanoyl))))-NH2

<400> 132
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Lys
        35

<210> 133
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..39
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(4-n-decycloxybenzoyl))))-NH2

<400> 133
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 134
<211> 39
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<220>
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(4'-octyloxy-biphenyl-4-carbonyl))))-NH2

<400> 134
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 135
<211> 39
<212> PRT
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<220>
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<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 39
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(12-phenyl-dodecanoyl))))-NH2

<400> 135
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Lys
35

<210> 136
<211> 40
<212> PRT
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<220>
<221> SOURCE
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-cholyl)))-NH2

<400> 136
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 137
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-lithocholyl)))-NH2

<400> 137
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 138
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-linoleoyl)))-NH2

<400> 138
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 139
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(4-dodecyclobenzoyl))))-NH2

<400> 139
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 140
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-heneicosanoyl)))-NH2

<400> 140
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 141
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-behenoyl)))-NH2

<400> 141
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 142
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-(cis-1-nonadecanoyl))))-NH2

<400> 142
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 143
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(gamma-Glu(N-alfa-(4-n-decycloxybenzoyl))))-NH2

<400> 143
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys

35 40

<210> 144
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(4'-octyloxy-biphenyl-4-carbonyl))))-NH2

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

<210> 145
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<222> 1..40
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-(12-phenyl-dodecanoyl))))-NH2

<400> 145
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 146
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(beta-Ala(N-alfa-hexadecanoyl)))-NH2

<400> 146
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 147
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<400> 147
His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Lys Lys Ala Gln Glu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 148
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Ser is modified with an NH2 group

<400> 148
Gly His Ser Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp
1   5   10   15
Ser Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro
            20   25   30
Ser Ser Gly Ala Pro Pro Pro Ser
        35   40

<210> 149
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
      lon-(PEG40kDa))-NH2

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 149
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 150
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Cys is functionalized as Cys(PEG40kDa)-NH2

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 150
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Cys

35 40

<210> 151
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(gamma-Glu(N-alfa-hexadecanoyl)))-NH2

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 151
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Glu Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 152
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 40
<223> Lys is functionalized at the amino side chain group as Lys(N-epsi
lon-(hexadecanoyl))-NH2

<400> 152
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 153
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib aminoacid

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<400> 153
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 154
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 154
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 155
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 155
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 156
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid

<400> 156
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 157
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2

<223> Xaa is a D-Ser

<400> 157
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 158
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 158
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 159
<211> 40
<212> PRT
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<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 159
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys

35 40

<210> 160
<211> 40
<212> PRT
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<220>
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

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<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 160
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 161
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> MOD_RES
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<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 161
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 162
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<221> SOURCE
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<400> 162
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 163
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
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/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 163
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Lys
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 164
<211> 40
<212> PRT
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 164
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1 5 10 15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 165
<211> 40
<212> PRT
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<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 165
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 166
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<400> 166
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 167
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<400> 167
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 168
<211> 40
<212> PRT
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<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40

<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 168
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 169
<211> 40
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<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
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      /organism="Artificial Sequence"

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<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 169
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 170
<211> 40
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<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>

<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<400> 170
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Xaa Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 171
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 171
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 172
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..40
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 40
<223> Lys is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 172
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser

20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 173
<211> 39
<212> PRT
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<220>
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<220>
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<222> 39
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<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 173
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 174
<211> 39
<212> PRT
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<222> 39
<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is an Aib amino acid

<400> 174
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 175
<211> 39
<212> PRT
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<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 175
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 176
<211> 39
<212> PRT
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<222> 2
<223> Xaa is a D-Ser

<400> 176
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 177
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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<211> 39
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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 178
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

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<223> Ser is modified with an NH2 group

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<221> NON_STD
<222> 2

<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<400> 179
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Xaa Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 180
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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 180
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Asp Lys
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 181
<211> 39
<212> PRT
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<220>
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<222> 2
<223> Xaa is a D-Ser

<400> 181

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1   5   10   15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 182
<211> 39
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<220>
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<222> 2
<223> Xaa is a D-Ser

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

<210> 183
<211> 39
<212> PRT
<213> Artificial Sequence

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<220>
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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
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<222> 28
<223> Xaa is an Aib amino acid

<400> 183
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser

20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 184
<211> 39
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<220>
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<400> 184
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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<223> Ser is modified with an NH2 group

<220>
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<223> Xaa is a D-Ser

<400> 185
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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
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<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<400> 186
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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
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<400> 187
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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

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<400> 188
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1 5 10 15
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20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 189
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<222> 40
<223> Lys is modified with an NH2 group

<220>
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<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 189
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 190
<211> 40
<212> PRT
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<223> Xaa is a D-Ser

<220>
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<222> 14
<223> Xaa is an Nle amino acid

<400> 190
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 191
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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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

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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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<400> 196
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

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/organism="Artificial Sequence"

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<223> Xaa is a D-Ser

<220>
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<222> 14
<223> Xaa is an Nle amino acid

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1 5 10 15

Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

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<223> Xaa is a D-Ser

<220>
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<222> 14
<223> Xaa is an Nle amino acid

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Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 201
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<223> Xaa is a D-Ser

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<222> 14
<223> Xaa is an Nle amino acid

<400> 201

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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
            20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
        35 40

<210> 202
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      /organism="Artificial Sequence"

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<223> Lys is modified with an NH2 group

<220>
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<223> Xaa is a D-Ser

<220>
<221> MOD_RES
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<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
        35 40

<210> 203
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Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

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<222> 14
<223> Xaa is an Nle amino acid

<400> 204
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1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

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<223> Xaa is an Nle amino acid

<400> 205
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

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<211> 40
<212> PRT
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<220>
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<220>
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<222> 40
<223> Lys is modified with an NH2 group

<220>
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<223> Xaa is a D-Ser

<220>
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<222> 29
<223> Xaa is a D-Ala

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 206
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Xaa Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser Lys
        35   40

<210> 207
<211> 40
<212> PRT
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<220>
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<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 207
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 208
<211> 40
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<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 208
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser Lys
35 40

<210> 209
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<220>
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<220>
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<222> 2
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 209
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 210
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<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 210
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 211
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 211
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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 212
<211> 39
<212> PRT
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<220>
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<222> 2
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 212
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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 213

<211> 39
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 213
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1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 214
<211> 39
<212> PRT
<213> Artificial Sequence

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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 214
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 215
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 215
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 216
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 216
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 217
<211> 39
<212> PRT
<213> Artificial Sequence

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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 217
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Ala Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 218
<211> 39
<212> PRT
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<220>
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/organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
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<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<220>
<221> NON_STD
<222> 29

<223> Xaa is a D-Ala

<400> 218
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Xaa Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 219
<211> 39
<212> PRT
<213> Artificial Sequence

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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 219
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Lys
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 220
<211> 39
<212> PRT
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<220>
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<223> Ser is modified with an NH2 group
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<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
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<222> 14
<223> Xaa is an Nle amino acid

<400> 220
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Glu
1   5   10   15
Arg Arg Ala Lys Asp Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 221
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<212> PRT
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<223> /mol_type="protein"
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      /organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 221
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 222
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

<220>
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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
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<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 222
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Asp Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 223
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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      /organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 28
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 223
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1   5   10   15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Xaa Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 224
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39

<223> /mol_type="protein"
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/organism="Artificial Sequence"

<220>
<221> MOD_RES
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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 224
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Asn Thr Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 225
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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/organism="Artificial Sequence"

<220>
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<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 225
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 226
<211> 39
<212> PRT
<213> Artificial Sequence

<220>

<221> SOURCE
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/organism="Artificial Sequence"

<220>
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<223> Ser is modified with an NH2 group

<220>
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<222> 2
<223> Xaa is a D-Ser

<220>
<221> NON_STD
<222> 29
<223> Xaa is a D-Ala

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 226
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Arg Xaa Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 227
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 227
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Lys Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 228
<211> 39
<212> PRT
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<220>
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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 228
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Arg Ala Gln Asp Phe Ile Glu Trp Leu Lys Ser Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 229
<211> 39
<212> PRT
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<220>
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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 229
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Gln Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 230
<211> 39

<212> PRT
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<220>
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<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 230
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Gln Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 231
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid

<400> 231
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Gln Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 232
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<220>
<221> MOD_RES
<222> 2
<223> Xaa is an Aib amino acid

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 232
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Gln Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 233
<211> 39
<212> PRT
<213> Artificial Sequence

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/organism="Artificial Sequence"

<220>
<221> MOD_RES
<222> 39
<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 233
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Arg Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 234
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<223> /mol_type="protein"
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/organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 234
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1 5 10 15
Arg Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 235
<211> 39
<212> PRT
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<220>
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/note="Exendin-4 peptide analogue"
/organism="Artificial Sequence"

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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<400> 235
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ser
1 5 10 15
Lys Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<210> 236
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<221> MOD_RES
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<223> Ser is modified with an NH2 group

<220>
<221> NON_STD
<222> 2
<223> Xaa is a D-Ser

<220>
<221> MOD_RES
<222> 14
<223> Xaa is an Nle amino acid

<400> 236
His Xaa Gln Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Ser
1   5   10   15
Lys Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35

<210> 237
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<221> SOURCE
<222> 1..39
<223> /mol_type="protein"
      /note="Exendin-4 peptide analogue"
      /organism="Artificial Sequence"

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1   5   10   15
Lys Ala Ala Gln Asp Phe Ile Glu Trp Leu Lys Ala Gly Gly Pro Ser
            20   25   30
Ser Gly Ala Pro Pro Pro Ser
        35