

<110> HANMI PHARM. CO., LTD.

<120> NOVEL METHOD FOR PREPARING LONG-ACTING DRUG CONJUGATE THROUGH PREPARATION OF INTERMEDIATE

<130> OPA19170

<160> 10

<170> KoPatentIn 3.0

<210> 1

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> GLP-1/GIP/Glucagon Triple Agonist analog 1

<220>

<221> VARIANT

<222> (2)

<223> Xaa = aminoisobutyric acid

<400> 1

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

Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Leu Asp His His Pro Ser
20 25 30

Ser Gly Gln Pro Pro Pro Ser Cys
35 40

<210> 2

<211> 39

<212> PRT

<213> Artificial Sequence

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<223> GLP-1/GIP/Glucagon Triple Agonist analog 2

<220>

<221> VARIANT

<222> (2)

<223> Xaa = aminoisobutyric acid

<400> 2
Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15
Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Leu Asp His His Cys Ser
20 25 30
Ser Gly Gln Pro Pro Pro Ser
35

<210> 3
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> GLP-1/GIP/Glucagon Triple Agonist analog 3

<220>
<221> VARIANT
<222> (2)
<223> Xaa = aminoisobutyric acid

<400> 3
His Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15
Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Leu Asp His His Pro Ser
20 25 30
Ser Gly Gln Pro Pro Pro Ser Cys
35 40

<210> 4
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analog 1

<220>
<221> VARIANT

<222> (2)
<223> Xaa = aminoisobutyric acid

<400> 4
Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15
Lys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr Cys
20 25 30

<210> 5
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Glucagon analog 2

<220>
<221> VARIANT
<222> (2)
<223> Xaa = aminoisobutyric acid

<400> 5
Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Glu
1 5 10 15
Cys Arg Ala Lys Glu Phe Val Gln Trp Leu Met Asn Thr
20 25

<210> 6
<211> 30
<212> PRT
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<220>
<223> Glucagon analog 3

<220>
<221> VARIANT
<222> (2)
<223> Xaa = aminoisobutyric acid

<400> 6
Tyr Xaa Gln Gly Thr Phe Thr Ser Asp Tyr Ser Lys Tyr Leu Asp Ser
1 5 10 15

Arg Arg Ala Gln Asp Phe Val Gln Trp Leu Met Asn Thr Cys
20 25 30

<210> 7
<211> 12
<212> PRT
<213> homo sapiens

<400> 7
Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro
1 5 10

<210> 8
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 8
Ser Cys Pro
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<210> 9
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of hinge region

<400> 9
Pro Ser Cys Pro
1

<210> 10
<211> 221
<212> PRT
<213> homo sapiens

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

 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 20 25 30

 Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
 35 40 45

 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 50 55 60

 Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 65 70 75 80

 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 85 90 95

 Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys
 100 105 110

 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 115 120 125

 Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 130 135 140

 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 145 150 155 160

 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 165 170 175

 Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
 180 185 190

 Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 195 200 205

 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 210 215 220