

SEQUENCE LISTING

<110> Otsuka Chemical Co., Ltd.
 <120> Method of Manufacturing peptide
 <130> SG1560A
 <150> JP 2007-199372
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 <170> PatentIn version 3.1
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 <220>
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 <222> (1)..(1)
 <223> Ala having blocking group Fmoc
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 <222> (2)..(2)
 <223> Cys having blocking group Trt
 <400> 1
 Ala Cys Gly Leu
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 <220>
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 <222> (1)..(1)
 <223> ACETYLATION
 <400> 2
 Ala Cys Gly Leu
 1
 <210> 3
 <211> 4
 <212> PRT
 <213> artificial sequence
 <220>
 <223> amino acid sequence having methylated cysteine (Example 1)
 <220>
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 <222> (1)..(1)
 <223> ACETYLATION

<220>
<221> MOD_RES
<222> (2)..(2)
<223> METHYLATION

<400> 3

Ala Cys Gly Leu
1

<210> 4
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<220>
<223> acetylated amino acid sequence (Example 1)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> ACETYLATION

<400> 4

Ala Ser Gly Leu
1

<210> 5
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<213> artificial sequence

<220>
<223> amino acid sequence having blocking groups (Example 2)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Val having blocking group Fmoc

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asp having blocking group OtBu

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Lys having blocking group Boc

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Cys having blocking group Trt

<400> 5

Val Asp Lys Ala Val Cys Gly Leu
1 5

<210> 6
<211> 8
<212> PRT
<213> artificial sequence

<220>

<223> amino acid sequence (Example 2)

<400> 6

Val Asp Lys Ala Val Cys Gly Leu
1 5

<210> 7

<211> 8

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<220>

<223> amino acid sequence having methylated cysteine (Example 2)

<220>

<221> MOD_RES

<222> (6)..(6)

<223> METHYLATION

<400> 7

Val Asp Lys Ala Val Cys Gly Leu
1 5

<210> 8

<211> 8

<212> PRT

<213> artificial sequence

<220>

<223> amino acid sequence (Example 2)

<400> 8

Val Asp Lys Ala Val Ser Gly Leu
1 5

<210> 9

<211> 11

<212> PRT

<213> artificial sequence

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<223> amino acid sequence having blocking groups (Example 3)

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Leu having blocking group Fmoc

<220>

<221> MOD_RES

<222> (3)..(3)

<223> Arg having blocking group Pbf

<220>

<221> MOD_RES

<222> (5)..(5)

<223> Tyr having blocking group tBu

<220>

<221> MOD_RES

<222> (6)..(6)

<223> Cys having blocking group Trt

<220>

<221> MOD_RES

<222> (10)..(10)
<223> Arg having blocking group Pbf

<400> 9

Leu Phe Arg Val Tyr Cys Asn Phe Leu Arg Gly
1 5 10

<210> 10
<211> 11
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence (Example 3)

<400> 10

Leu Phe Arg Val Tyr Cys Asn Phe Leu Arg Gly
1 5 10

<210> 11
<211> 11
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having methylated cysteine (Example 3)

<220>
<221> MOD_RES
<222> (6)..(6)
<223> METHYLATION

<400> 11

Leu Phe Arg Val Tyr Cys Asn Phe Leu Arg Gly
1 5 10

<210> 12
<211> 11
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence (Example 3)

<400> 12

Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly
1 5 10

<210> 13
<211> 6
<212> PRT
<213> artificial sequence

<220>
<223> glycosylated amino acid sequence having blocking groups
(Example 4)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Ala having blocking group Fmoc

<220>
<221> CARBOHYD

<222> (5)..(5)
<223> Asn glycosylated by asialo oligosaccharide chain

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ser having blocking group tBu

<400> 13

Ala Leu Leu Val Asn Ser
1 5

<210> 14
<211> 6
<212> PRT
<213> artificial sequence

<220>
<223> glycosylated amino acid sequence having blocking groups
(Example 4)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Ala having blocking group Boc

<220>
<221> CARBOHYD
<222> (5)..(5)
<223> Asn glycosylated by asialo oligosaccharide chain

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ser having blocking group tBu

<400> 14

Ala Leu Leu Val Asn Ser
1 5

<210> 15
<211> 6
<212> PRT
<213> artificial sequence

<220>
<223> glycosylated amino acid sequence having benzyl thioester group
(Example 4)

<220>
<221> CARBOHYD
<222> (5)..(5)
<223> Asn glycosylated by asialo oligosaccharide chain

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ser having benzyl thioester group

<400> 15

Ala Leu Leu Val Asn Ser
1 5

<210> 16
<211> 14

<212> PRT
 <213> artificial sequence

 <220>
 <223> amino acid sequence having blocking groups (Example 4)

 <220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Cys having blocking groups Fmoc and Trt

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> Trp having blocking group Boc

 <220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> Glu having blocking group OtBu

 <220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> His having blocking group Trt

 <220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> Asp having blocking group OtBu

 <220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> Lys having blocking group Boc

 <400> 16

 Cys Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala
 1 5 10

 <210> 17
 <211> 14
 <212> PRT
 <213> artificial sequence

 <220>
 <223> amino acid sequence (Example 4)

 <400> 17

 Cys Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala
 1 5 10

 <210> 18
 <211> 20
 <212> PRT
 <213> artificial sequence

 <220>
 <223> glycosylated amino acid sequence (Example 4)

 <220>
 <221> CARBOHYD
 <222> (5)..(5)
 <223> Asn glycosylated by asialo oligosaccharide chain

 <400> 18

Ala Leu Leu Val Asn Ser Cys Gln Pro Trp Glu Pro Leu Gln Leu His
 1 5 10 15

Val Asp Lys Ala
 20

<210> 19
 <211> 20
 <212> PRT
 <213> artificial sequence

<220>
 <223> glycosylated amino acid sequence having methylated cysteine
 (Example 4)

<220>
 <221> CARBOHYD
 <222> (5)..(5)
 <223> Asn glycosylated by asialo oligosaccharide chain

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> METHYLATION

<400> 19

Ala Leu Leu Val Asn Ser Cys Gln Pro Trp Glu Pro Leu Gln Leu His
 1 5 10 15

Val Asp Lys Ala
 20

<210> 20
 <211> 20
 <212> PRT
 <213> artificial sequence

<220>
 <223> glycosylated amino acid sequence (Example 4)

<220>
 <221> CARBOHYD
 <222> (5)..(5)
 <223> Asn glycosylated by asialo oligosaccharide chain

<400> 20

Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His
 1 5 10 15

Val Asp Lys Ala
 20

<210> 21
 <211> 5
 <212> PRT
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<220>
 <223> amino acid sequence having blocking groups and methionine
 sulfoxide (Example 5)

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Gly having blocking group Fmoc

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Cys having blocking group Trt

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Methionine sulfoxide

<400> 21

Gly Cys Gly Met Ala
1 5

<210> 22
<211> 5
<212> PRT
<213> artificial sequence

<220>
<223> acetylated amino acid sequence having methionine sulfoxide
(Example 5)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Methionine sulfoxide

<400> 22

Gly Cys Gly Met Ala
1 5

<210> 23
<211> 5
<212> PRT
<213> artificial sequence

<220>
<223> acetylated amino acid sequence having methylated cysteine and
methionine sulfoxide (Example 5)

<220>
<221> MOD_RES
<222> (1)..(1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (2)..(2)
<223> METHYLATION

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Methionine sulfoxide

<400> 23

Gly Cys Gly Met Ala
1 5

<210> 24
 <211> 5
 <212> PRT
 <213> artificial sequence

<220>
 <223> acetylated amino acid sequence (Example 5)

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> ACETYLATION

<400> 24

Gly Ser Gly Met Ala
1 5

<210> 25
 <211> 18
 <212> PRT
 <213> artificial sequence

<220>
 <223> amino acid sequence having blocking groups (Example 6)

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Ala having blocking group Fmoc

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> His having blocking group Trt

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> Thr having blocking group tBu

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> Ser having blocking group tBu

<220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> Asp having blocking group OtBu

<220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> Thr having blocking group tBu

<220>
 <221> MOD_RES
 <222> (14)..(14)
 <223> Arg having blocking group Pbf

<400> 25

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala
1 5 10 15

Pro Gly

<210> 26
 <211> 19
 <212> PRT
 <213> artificial sequence

 <220>
 <223> glycosylated amino acid sequence having blocking groups
 (Example 6)

 <220>
 <221> CARBOHYD
 <222> (1)..(1)
 <223> Thr glycosylated by N-acetylgalactosamine

 <220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> His having blocking group Trt

 <220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> Thr having blocking group tBu

 <220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> Ser having blocking group tBu

 <220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> Asp having blocking group OtBu

 <220>
 <221> MOD_RES
 <222> (14)..(14)
 <223> Thr having blocking group tBu

 <220>
 <221> MOD_RES
 <222> (15)..(15)
 <223> Arg having blocking group Pbf

 <400> 26
 Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro
 1 5 10 15
 Ala Pro Gly

<210> 27
 <211> 20
 <212> PRT
 <213> artificial sequence

 <220>
 <223> glycosylated amino acid sequence having blocking groups
 (Example 6)

 <220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> Ser having blocking groups Boc and tBu

 <220>

<221> CARBOHYD
<222> (2)..(2)
<223> Thr glycosylated by N-acetylgalactosamine

<220>
<221> MOD_RES
<222> (7)..(7)
<223> His having blocking group Trt

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Thr having blocking group tBu

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Ser having blocking group tBu

<220>
<221> MOD_RES
<222> (14)..(14)
<223> Asp having blocking group OtBu

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Thr having blocking group tBu

<220>
<221> MOD_RES
<222> (16)..(16)
<223> Arg having blocking group Pbf

<400> 27

Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
1 5 10 15

Pro Ala Pro Gly
20

<210> 28
<211> 20
<212> PRT
<213> artificial sequence

<220>
<223> glycosylated amino acid sequence having benzyl thioester group
(Example 6)

<220>
<221> CARBOHYD
<222> (2)..(2)
<223> Thr glycosylated by N-acetylgalactosamine

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gly having benzyl thioester group

<400> 28

Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
1 5 10 15

Pro Ala Pro Gly
20

<210> 29
 <211> 20
 <212> PRT
 <213> artificial sequence

<220>
 <223> glycosylated amino acid sequence (Example 6)

<220>
 <221> CARBOHYD
 <222> (2)..(2)
 <223> Thr glycosylated by N-acetylgalactosamine

<400> 29

Cys Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
 1 5 10 15
 Pro Ala Pro Gly
 20

<210> 30
 <211> 40
 <212> PRT
 <213> artificial sequence

<220>
 <223> glycosylated amino acid sequence (Example 6)

<220>
 <221> CARBOHYD
 <222> (2)..(2)
 <223> Thr glycosylated by N-acetylgalactosamine

<220>
 <221> CARBOHYD
 <222> (22)..(22)
 <223> Thr glycosylated by N-acetylgalactosamine

<400> 30

Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
 1 5 10 15
 Pro Ala Pro Gly Cys Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala
 20 25 30
 Pro Asp Thr Arg Pro Ala Pro Gly
 35 40

<210> 31
 <211> 40
 <212> PRT
 <213> artificial sequence

<220>
 <223> glycosylated amino acid sequence having metylated cysteine
 (Example 6)

<220>
 <221> CARBOHYD
 <222> (2)..(2)
 <223> Thr glycosylated by N-acetylgalactosamine

<220>
 <221> MOD_RES
 <222> (21)..(21)

<223> METYLATION

<220>

<221> CARBOHYD

<222> (22)..(22)

<223> Thr glycosylated by N-acetylgalactosamine

<400> 31

Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
1 5 10 15

Pro Ala Pro Gly Cys Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala
20 25 30

Pro Asp Thr Arg Pro Ala Pro Gly
35 40

<210> 32

<211> 40

<212> PRT

<213> artificial sequence

<220>

<223> glycosylated amino acid sequence (Example 6)

<220>

<221> CARBOHYD

<222> (2)..(2)

<223> Thr glycosylated by N-acetylgalactosamine

<220>

<221> CARBOHYD

<222> (22)..(22)

<223> Thr glycosylated by N-acetylgalactosamine

<400> 32

Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg
1 5 10 15

Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala
20 25 30

Pro Asp Thr Arg Pro Ala Pro Gly
35 40

<210> 33

<211> 4

<212> PRT

<213> artificial sequence

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<223> amino acid sequence having blocking groups (Example 7)

<220>

<221> MOD_RES

<222> (1)..(1)

<223> Glu having blocking groups Boc and OtBu

<220>

<221> MOD_RES

<222> (2)..(2)

<223> Ser having blocking group tBu

<400> 33

Glu Ser Asn Gly

1

<210> 34
<211> 4
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having benzyl thioester group (Example 7)

<220>
<221> MOD_RES
<222> (4)..(4)
<223> Gly having benzyl thioester group

<400> 34

Glu Ser Asn Gly
1

<210> 35
<211> 4
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having threonine derivative and blocking groups (Example 7)

<220>
<221> MUTAGEN
<222> (1)..(1)
<223> Thr derivative having S-SsecBu group in place of hydroxy group and blocking group Boc

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Thr having blocking group tBu

<400> 35

Xaa Leu Thr Leu
1

<210> 36
<211> 4
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having threonine derivative (Example 7)

<220>
<221> MUTAGEN
<222> (1)..(1)
<223> Thr derivative having S-SsecBu group in place of hydroxy group

<400> 36

Xaa Leu Thr Leu
1

<210> 37
<211> 8
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having threonine derivative (Example 7)

<220>
<221> MUTAGEN
<222> (5)..(5)
<223> Thr derivative having thiol group in place of hydroxy group

<400> 37

Glu Ser Asn Gly Xaa Leu Thr Leu
1 5

<210> 38
<211> 8
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence having threonine derivative (Example 7)

<220>
<221> MUTAGEN
<222> (5)..(5)
<223> Thr derivative having methylated thiol group in place of hydroxy group

<400> 38

Glu Ser Asn Gly Xaa Leu Thr Leu
1 5

<210> 39
<211> 8
<212> PRT
<213> artificial sequence

<220>
<223> amino acid sequence (Example 7)

<400> 39

Glu Ser Asn Gly Thr Leu Thr Leu
1 5