

SEQUENCE LISTING

<110> I-MAB

<120> ANTI-CD73 ANTIBODIES AND USES THEREOF

<130> 54LW-250265-W02

<150> PCT/CN2017/072445

<151> 2017-01-24

<160> 61

<170> PatentIn version 3.5

<210> 1

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 1

Ser Gly Tyr Tyr Trp Asn
1 5

<210> 2

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2

Tyr Ile Asn Tyr Gly Gly Ser Asn Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 3

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 3

Asp Tyr Asp Ala Tyr Tyr Glu Ala Leu Asp Asp

1	5	10
---	---	----

<210> 4
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 4

Arg	Ala	Ser	Ser	Arg	Val	Asn	Tyr	Met	His
1				5					10

<210> 5
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 5

Ala	Thr	Ser	Asn	Leu	Ala	Ser
1				5		

<210> 6
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 6

Gln	Gln	Trp	Ser	Ser	Asn	Pro	Pro	Thr
1				5				

<210> 7
 <211> 50
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 7

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Lys Leu Glu Trp
35 40 45

Met Gly
50

<210> 8
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 8

Glu Ile Val Leu Ser Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Arg Pro Trp Ile Ser
35 40 45

Ala Thr
50

<210> 9
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 9

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu

1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly
20 25 30

Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly
50

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser Gly
20 25 30

Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu Trp
35 40 45

Met Gly
50

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly
20 25 30

Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly
50

<210> 12
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 12

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly
20 25 30

Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
35 40 45

Ile Gly
50

<210> 13
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 13

Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly

20

25

30

Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Met Gly
 50

<210> 14
 <211> 50
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 14

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu
 1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly
 20 25 30

Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp
 35 40 45

Ile Gly
 50

<210> 15
 <211> 50
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 15

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

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
 20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Pro Trp Ile Ser
35 40 45

Ala Thr
50

<210> 16
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 16

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Lys
35 40 45

Ala Thr
50

<210> 17
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 17

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Lys

35

40

45

Ala Thr
50

<210> 18
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 18

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile Ser
35 40 45

Ala Thr
50

<210> 19
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 19

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Pro Trp Ile Ser
35 40 45

Ala Thr
50

<210> 20
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 20

Glu Ile Val Leu Ser Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Pro Trp Ile Ser
35 40 45

Ala Thr
50

<210> 21
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 21

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
35 40 45

Lys Tyr Ala

50

<210> 22
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 22

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
35 40 45

Ala Thr
50

<210> 23
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 23

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
35 40 45

Ala Thr
50

<210> 24
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 24

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Ser Arg Val Asn Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Ser
35 40 45

Ala Thr
50

<210> 25
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 25

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

Tyr Asp Ala
50

<210> 26

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

<220>
<223> Synthetic

<400> 26

Thr Gly Tyr Tyr Trp Asn
1 5

<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 27

Cys Gly Tyr Tyr Trp Asn
1 5

<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 28

Ser Ala Tyr Tyr Trp Asn
1 5

<210> 29
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 29

Ser Pro Tyr Tyr Trp Asn
1 5

<210> 30
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 30

Tyr Ile Asn Tyr Gly Ala Ser Asn Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 31
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 31

Tyr Ile Asn Tyr Gly Pro Ser Asn Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 32
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 32

Tyr Ile Asn Tyr Gly Gly Thr Asn Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 33
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 33

Tyr Ile Asn Tyr Gly Gly Cys Asn Gly Tyr Asn Pro Ser Leu Lys Ser

1 5 10 15

<210> 34
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 34

Tyr Ile Asn Tyr Gly Gly Ser Asp Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 35
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 35

Tyr Ile Asn Tyr Gly Gly Ser Glu Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 36
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 36

Tyr Ile Asn Tyr Gly Gly Ser Gln Gly Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 37
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 37

Asp Tyr Asp Ala Tyr Tyr Asp Ala Leu Asp Asp
1 5 10

<210> 38
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 38

Asp Tyr Asp Ala Tyr Tyr Gln Ala Leu Asp Asp
1 5 10

<210> 39
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 39

Asp Tyr Asp Ala Tyr Tyr Asn Ala Leu Asp Asp
1 5 10

<210> 40
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 40

Asp Tyr Asp Ala Tyr Tyr Glu Gly Leu Asp Asp
1 5 10

<210> 41
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 41

Asp Tyr Asp Ala Tyr Tyr Glu Cys Leu Asp Asp
1 5 10

<210> 42

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 42

Arg Ala Thr Ser Arg Val Asn Tyr Met His
1 5 10

<210> 43

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 43

Arg Ala Cys Ser Arg Val Asn Tyr Met His
1 5 10

<210> 44

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 44

Arg Ala Ser Thr Arg Val Asn Tyr Met His
1 5 10

<210> 45

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 45

Arg Ala Ser Cys Arg Val Asn Tyr Met His
1 5 10

<210> 46

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 46

Asn Gln Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 47

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 47

Asp Gln Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 48

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 48

Glu Gln Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 49

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 49

Gln Asn Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 50

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 50

Gln Asp Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 51

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 51

Gln Glu Trp Ser Ser Asn Pro Pro Thr
1 5

<210> 52

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 52

Gln Gln Tyr Ser Ser Asn Pro Pro Thr
1 5

<210> 53

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

<220>
<223> Synthetic

<400> 53

Gln Gln Trp Thr Ser Asn Pro Pro Thr
1 5

<210> 54
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 54

Gln Gln Trp Cys Ser Asn Pro Pro Thr
1 5

<210> 55
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 55

Gln Gln Trp Ser Thr Asn Pro Pro Thr
1 5

<210> 56
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 56

Gln Gln Trp Ser Cys Asn Pro Pro Thr
1 5

<210> 57
<211> 360
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 57

Gly Ala Thr Gly Thr Ala Cys Ala Gly Cys Thr Thr Cys Ala Gly Gly
1 5 10 15

Ala Gly Thr Cys Ala Gly Gly Ala Cys Cys Thr Gly Gly Cys Cys Thr
20 25 30

Cys Gly Thr Gly Ala Ala Ala Cys Cys Thr Thr Cys Thr Cys Ala Gly
35 40 45

Thr Cys Thr Cys Thr Gly Thr Cys Thr Cys Thr Cys Ala Cys Cys Thr
50 55 60

Gly Cys Thr Cys Thr Gly Thr Cys Ala Cys Thr Gly Gly Cys Thr Ala
65 70 75 80

Cys Thr Cys Cys Ala Thr Cys Ala Cys Cys Ala Gly Thr Gly Gly Thr
85 90 95

Thr Ala Thr Thr Ala Cys Thr Gly Gly Ala Ala Cys Thr Gly Gly Ala
100 105 110

Thr Cys Cys Gly Gly Cys Ala Gly Thr Thr Thr Cys Cys Ala Gly Gly
115 120 125

Ala Ala Ala Cys Ala Ala Ala Cys Thr Gly Gly Ala Ala Thr Gly Gly
130 135 140

Ala Thr Gly Gly Gly Cys Thr Ala Cys Ala Thr Ala Ala Ala Cys Thr
145 150 155 160

Ala Cys Gly Gly Cys Gly Gly Thr Ala Gly Cys Ala Ala Thr Gly Gly
165 170 175

Cys Thr Ala Cys Ala Ala Cys Cys Cys Ala Thr Cys Thr Cys Thr Cys
180 185 190

Ala Ala Ala Ala Gly Thr Cys Gly Gly Ala Thr Cys Thr Cys Cys Ala
195 200 205

Thr Cys Ala Cys Thr Cys Gly Gly Gly Ala Cys Ala Cys Ala Thr Cys
210 215 220

Thr Ala Ala Gly Ala Ala Cys Cys Ala Gly Thr Thr Thr Thr Thr Cys
225 230 235 240

Cys Thr Gly Ala Ala Gly Cys Thr Gly Ala Ala Thr Thr Cys Thr Gly
245 250 255

Thr Gly Ala Cys Thr Ala Cys Thr Gly Ala Gly Gly Ala Cys Ala Cys
260 265 270

Ala Gly Cys Thr Ala Cys Ala Thr Ala Thr Thr Ala Cys Thr Gly Thr
275 280 285

Gly Cys Ala Ala Gly Ala Gly Ala Cys Thr Ala Thr Gly Ala Thr Gly
290 295 300

Gly Thr Thr Ala Cys Thr Ala Cys Gly Ala Ala Gly Cys Thr Cys Thr
305 310 315 320

Gly Gly Ala Cys Gly Ala Cys Thr Gly Gly Gly Gly Thr Cys Ala Ala
325 330 335

Gly Gly Ala Ala Cys Cys Thr Cys Ala Gly Thr Cys Ala Cys Cys Gly
340 345 350

Thr Cys Thr Cys Cys Thr Cys Ala
355 360

<210> 58
<211> 318
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthetic

<400> 58

Cys Ala Ala Ala Thr Thr Gly Thr Thr Cys Thr Cys Thr Cys Cys Cys
1 5 10 15

Ala Gly Thr Cys Thr Cys Cys Ala Gly Cys Ala Ala Thr Cys Cys Thr
20 25 30

Gly Thr Cys Thr Gly Cys Ala Thr Cys Thr Cys Cys Ala Gly Gly Gly
35 40 45

Gly Ala Gly Ala Ala Gly Gly Thr Cys Ala Cys Ala Ala Thr Gly Ala
50 55 60

Cys Thr Thr Gly Cys Ala Gly Gly Gly Cys Cys Ala Gly Cys Thr Cys
65 70 75 80

Ala Cys Gly Thr Gly Thr Ala Ala Ala Thr Thr Ala Cys Ala Thr Gly
85 90 95

Cys Ala Cys Thr Gly Gly Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala
100 105 110

Ala Gly Cys Cys Ala Gly Gly Ala Thr Cys Cys Thr Cys Cys Cys Cys
115 120 125

Cys Ala Ala Ala Cys Cys Cys Thr Gly Gly Ala Thr Thr Thr Cys Thr
130 135 140

Gly Cys Cys Ala Cys Ala Thr Cys Cys Ala Ala Cys Cys Thr Gly Gly
145 150 155 160

Cys Thr Thr Cys Thr Gly Gly Ala Gly Thr Cys Cys Cys Thr Gly Cys
165 170 175

Thr Cys Gly Cys Thr Thr Cys Ala Gly Thr Gly Gly Cys Ala Gly Thr
180 185 190

Gly Gly Gly Thr Cys Thr Gly Gly Gly Ala Cys Cys Thr Cys Thr Thr

195

200

205

Ala Cys Thr Cys Thr Cys Thr Cys Ala Cys Ala Ala Thr Thr Ala Gly
 210 215 220

Cys Ala Gly Ala Gly Thr Ala Gly Ala Gly Ala Cys Thr Gly Ala Ala
 225 230 235 240

Gly Ala Thr Gly Cys Thr Gly Cys Cys Ala Cys Thr Thr Ala Thr Thr
 245 250 255

Ala Cys Thr Gly Cys Cys Ala Gly Cys Ala Gly Thr Gly Gly Ala Gly
 260 265 270

Thr Ala Gly Thr Ala Ala Cys Cys Cys Ala Cys Cys Cys Ala Cys Gly
 275 280 285

Thr Thr Cys Gly Gly Ala Gly Gly Gly Gly Gly Ala Cys Cys Ala
 290 295 300

Ala Gly Cys Thr Gly Gly Ala Ala Ala Thr Ala Ala Ala Ala
 305 310 315

<210> 59

<211> 360

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 59

Gly Ala Gly Gly Thr Ala Cys Ala Gly Cys Thr Thr Cys Ala Gly Gly
 1 5 10 15

Ala Gly Thr Cys Ala Gly Gly Ala Cys Cys Thr Gly Gly Cys Cys Thr
 20 25 30

Cys Gly Thr Gly Ala Ala Ala Cys Cys Thr Thr Cys Thr Gly Ala Gly
 35 40 45

Ala Cys Thr Cys Thr Gly Thr Cys Thr Cys Thr Cys Ala Cys Cys Thr

50

55

60

Gly Cys Gly Cys Thr Gly Thr Cys Thr Cys Thr Gly Gly Cys Thr Ala
 65 70 75 80

Cys Thr Cys Cys Ala Thr Cys Ala Cys Cys Ala Gly Thr Gly Gly Thr
 85 90 95

Thr Ala Thr Thr Ala Cys Thr Gly Gly Ala Ala Cys Thr Gly Gly Ala
 100 105 110

Thr Cys Cys Gly Gly Cys Ala Gly Cys Cys Thr Cys Cys Ala Gly Gly
 115 120 125

Ala Ala Ala Gly Ala Ala Gly Cys Thr Gly Gly Ala Ala Thr Gly Gly
 130 135 140

Ala Thr Gly Gly Gly Cys Thr Ala Cys Ala Thr Cys Ala Ala Cys Thr
 145 150 155 160

Ala Cys Gly Gly Cys Gly Gly Thr Ala Gly Cys Ala Ala Thr Gly Gly
 165 170 175

Cys Thr Ala Cys Ala Ala Cys Cys Cys Ala Thr Cys Thr Cys Thr Cys
 180 185 190

Ala Ala Ala Ala Gly Thr Cys Gly Gly Ala Thr Cys Ala Cys Cys Ala
 195 200 205

Thr Cys Thr Cys Thr Ala Gly Gly Gly Ala Cys Ala Cys Ala Thr Cys
 210 215 220

Thr Ala Ala Gly Ala Ala Cys Cys Ala Gly Thr Thr Thr Thr Cys Cys
 225 230 235 240

Cys Thr Gly Ala Ala Gly Cys Thr Gly Ala Gly Thr Thr Cys Thr Gly
 245 250 255

Thr Gly Ala Cys Thr Gly Cys Thr Gly Cys Cys Gly Ala Cys Ala Cys
 260 265 270

Ala Gly Cys Thr Gly Thr Gly Thr Ala Thr Thr Ala Cys Thr Gly Thr
275 280 285

Gly Cys Ala Ala Gly Ala Gly Ala Cys Thr Ala Thr Gly Ala Thr Gly
290 295 300

Cys Thr Thr Ala Cys Thr Ala Cys Gly Ala Ala Gly Cys Thr Cys Thr
305 310 315 320

Gly Gly Ala Cys Gly Ala Cys Thr Gly Gly Gly Gly Thr Cys Ala Ala
325 330 335

Gly Gly Ala Ala Cys Cys Ala Cys Ala Gly Thr Cys Ala Cys Cys Gly
340 345 350

Thr Cys Thr Cys Cys Thr Cys Ala
355 360

<210> 60
<211> 318
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 60

Gly Ala Ala Ala Thr Thr Gly Thr Thr Cys Thr Cys Thr Cys Cys Cys
1 5 10 15

Ala Gly Thr Cys Thr Cys Cys Ala Gly Cys Ala Ala Cys Cys Cys Thr
20 25 30

Gly Thr Cys Thr Cys Thr Gly Thr Cys Thr Cys Cys Ala Gly Gly Gly
35 40 45

Gly Ala Gly Ala Gly Gly Gly Cys Cys Ala Cys Ala Cys Thr Gly Thr
50 55 60

Cys Thr Thr Gly Cys Ala Gly Gly Gly Cys Cys Ala Gly Cys Thr Cys
65 70 75 80

Ala Cys Gly Thr Gly Thr Ala Ala Ala Thr Thr Ala Cys Ala Thr Gly
85 90 95

Cys Ala Cys Thr Gly Gly Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala
100 105 110

Ala Gly Cys Cys Ala Gly Gly Ala Cys Ala Gly Thr Cys Cys Cys Cys
115 120 125

Cys Ala Gly Ala Cys Cys Cys Thr Gly Gly Ala Thr Thr Thr Cys Thr
130 135 140

Gly Cys Cys Ala Cys Ala Thr Cys Cys Ala Ala Cys Cys Thr Gly Gly
145 150 155 160

Cys Thr Thr Cys Thr Gly Gly Ala Gly Thr Cys Cys Cys Thr Gly Cys
165 170 175

Thr Cys Gly Cys Thr Thr Cys Ala Gly Thr Gly Gly Cys Ala Gly Thr
180 185 190

Gly Gly Gly Thr Cys Thr Gly Gly Gly Ala Cys Cys Thr Cys Thr Thr
195 200 205

Ala Cys Ala Cys Thr Cys Thr Cys Ala Cys Ala Ala Thr Thr Ala Gly
210 215 220

Cys Ala Gly Cys Cys Thr Gly Gly Ala Gly Cys Cys Ala Gly Ala Ala
225 230 235 240

Gly Ala Thr Thr Thr Cys Gly Cys Cys Gly Thr Gly Thr Ala Thr Thr
245 250 255

Ala Cys Thr Gly Cys Cys Ala Gly Cys Ala Gly Thr Gly Gly Ala Gly
260 265 270

Thr Ala Gly Thr Ala Ala Cys Cys Cys Ala Cys Cys Cys Ala Cys Gly
275 280 285

Thr Thr Cys Gly Gly Ala Gly Gly Gly Gly Gly Gly Ala Cys Cys Ala

290

295

300

Ala Gly Gly Thr Gly Gly Ala Ala Ala Thr Cys Ala Ala Ala
 305 310 315

<210> 61

<211> 574

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 61

Met Cys Pro Arg Ala Ala Arg Ala Pro Ala Thr Leu Leu Leu Ala Leu
 1 5 10 15

Gly Ala Val Leu Trp Pro Ala Ala Gly Ala Trp Glu Leu Thr Ile Leu
 20 25 30

His Thr Asn Asp Val His Ser Arg Leu Glu Gln Thr Ser Glu Asp Ser
 35 40 45

Ser Lys Cys Val Asn Ala Ser Arg Cys Met Gly Gly Val Ala Arg Leu
 50 55 60

Phe Thr Lys Val Gln Gln Ile Arg Arg Ala Glu Pro Asn Val Leu Leu
 65 70 75 80

Leu Asp Ala Gly Asp Gln Tyr Gln Gly Thr Ile Trp Phe Thr Val Tyr
 85 90 95

Lys Gly Ala Glu Val Ala His Phe Met Asn Ala Leu Arg Tyr Asp Ala
 100 105 110

Met Ala Leu Gly Asn His Glu Phe Asp Asn Gly Val Glu Gly Leu Ile
 115 120 125

Glu Pro Leu Leu Lys Glu Ala Lys Phe Pro Ile Leu Ser Ala Asn Ile
 130 135 140

Lys Ala Lys Gly Pro Leu Ala Ser Gln Ile Ser Gly Leu Tyr Leu Pro

145		150		155		160									
Tyr	Lys	Val	Leu	Pro	Val	Gly	Asp	Glu	Val	Val	Gly	Ile	Val	Gly	Tyr
			165					170						175	
Thr	Ser	Lys	Glu	Thr	Pro	Phe	Leu	Ser	Asn	Pro	Gly	Thr	Asn	Leu	Val
			180					185					190		
Phe	Glu	Asp	Glu	Ile	Thr	Ala	Leu	Gln	Pro	Glu	Val	Asp	Lys	Leu	Lys
		195					200					205			
Thr	Leu	Asn	Val	Asn	Lys	Ile	Ile	Ala	Leu	Gly	His	Ser	Gly	Phe	Glu
	210					215					220				
Met	Asp	Lys	Leu	Ile	Ala	Gln	Lys	Val	Arg	Gly	Val	Asp	Val	Val	Val
225					230					235					240
Gly	Gly	His	Ser	Asn	Thr	Phe	Leu	Tyr	Thr	Gly	Asn	Pro	Pro	Ser	Lys
				245					250					255	
Glu	Val	Pro	Ala	Gly	Lys	Tyr	Pro	Phe	Ile	Val	Thr	Ser	Asp	Asp	Gly
			260					265					270		
Arg	Lys	Val	Pro	Val	Val	Gln	Ala	Tyr	Ala	Phe	Gly	Lys	Tyr	Leu	Gly
		275					280					285			
Tyr	Leu	Lys	Ile	Glu	Phe	Asp	Glu	Arg	Gly	Asn	Val	Ile	Ser	Ser	His
	290					295					300				
Gly	Asn	Pro	Ile	Leu	Leu	Asn	Ser	Ser	Ile	Pro	Glu	Asp	Pro	Ser	Ile
305					310					315					320
Lys	Ala	Asp	Ile	Asn	Lys	Trp	Arg	Ile	Lys	Leu	Asp	Asn	Tyr	Ser	Thr
				325					330					335	
Gln	Glu	Leu	Gly	Lys	Thr	Ile	Val	Tyr	Leu	Asp	Gly	Ser	Ser	Gln	Ser
			340					345					350		
Cys	Arg	Phe	Arg	Glu	Cys	Asn	Met	Gly	Asn	Leu	Ile	Cys	Asp	Ala	Met
		355					360					365			

Ile Asn Asn Asn Leu Arg His Thr Asp Glu Met Phe Trp Asn His Val
370 375 380

Ser Met Cys Ile Leu Asn Gly Gly Gly Ile Arg Ser Pro Ile Asp Glu
385 390 395 400

Arg Asn Asn Gly Thr Ile Thr Trp Glu Asn Leu Ala Ala Val Leu Pro
405 410 415

Phe Gly Gly Thr Phe Asp Leu Val Gln Leu Lys Gly Ser Thr Leu Lys
420 425 430

Lys Ala Phe Glu His Ser Val His Arg Tyr Gly Gln Ser Thr Gly Glu
435 440 445

Phe Leu Gln Val Gly Gly Ile His Val Val Tyr Asp Leu Ser Arg Lys
450 455 460

Pro Gly Asp Arg Val Val Lys Leu Asp Val Leu Cys Thr Lys Cys Arg
465 470 475 480

Val Pro Ser Tyr Asp Pro Leu Lys Met Asp Glu Val Tyr Lys Val Ile
485 490 495

Leu Pro Asn Phe Leu Ala Asn Gly Gly Asp Gly Phe Gln Met Ile Lys
500 505 510

Asp Glu Leu Leu Arg His Asp Ser Gly Asp Gln Asp Ile Asn Val Val
515 520 525

Ser Thr Tyr Ile Ser Lys Met Lys Val Ile Tyr Pro Ala Val Glu Gly
530 535 540

Arg Ile Lys Phe Ser Thr Gly Ser His Cys His Gly Ser Phe Ser Leu
545 550 555 560

Ile Phe Leu Ser Leu Trp Ala Val Ile Phe Val Leu Tyr Gln
565 570