

SEQUENCE LISTING

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 <120> AGENTS FOR TREATMENT OF CLAUDIN EXPRESSING CANCER DISEASES
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 <160> 108
 <170> PatentIn version 3.5
 <210> 1
 <211> 261
 <212> PRT
 <213> Homo sapiens
 <400> 1
 Met Ala Val Thr Ala Cys Gln Gly Leu Gly Phe Val Val Ser Leu Ile
 1 5 10 15
 Gly Ile Ala Gly Ile Ile Ala Ala Thr Cys Met Asp Gln Trp Ser Thr
 20 25 30
 Gln Asp Leu Tyr Asn Asn Pro Val Thr Ala Val Phe Asn Tyr Gln Gly
 35 40 45
 Leu Trp Arg Ser Cys Val Arg Glu Ser Ser Gly Phe Thr Glu Cys Arg
 50 55 60
 Gly Tyr Phe Thr Leu Leu Gly Leu Pro Ala Met Leu Gln Ala Val Arg
 65 70 75 80
 Ala Leu Met Ile Val Gly Ile Val Leu Gly Ala Ile Gly Leu Leu Val
 85 90 95
 Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser
 100 105 110
 Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser
 115 120 125
 Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val
 130 135 140
 Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly
 145 150 155 160
 Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe
 165 170 175

Val Gly Trp Val Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met
180 185 190

Cys Ile Ala Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala
195 200 205

Val Ser Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly
210 215 220

Phe Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile
225 230 235 240

Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro Ser
245 250 255

Lys His Asp Tyr Val
260

<210> 2
<211> 220
<212> PRT
<213> Homo sapiens

<400> 2

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

Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp Lys Val
20 25 30

Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val Val Trp Glu
35 40 45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala
65 70 75 80

Arg Ala Leu Cys Val Ile Ala Leu Leu Val Ala Leu Phe Gly Leu Leu
85 90 95

Val Tyr Leu Ala Gly Ala Lys Cys Thr Thr Cys Val Glu Glu Lys Asp
100 105 110

Ser Lys Ala Arg Leu Val Leu Thr Ser Gly Ile Val Phe Val Ile Ser
115 120 125

Gly Val Leu Thr Leu Ile Pro Val Cys Trp Thr Ala His Ala Ile Ile
130 135 140

Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys Arg Glu Leu
145 150 155 160

Gly Ala Ser Leu Tyr Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
165 170 175

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly
180 185 190

Pro Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser
195 200 205

Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
210 215 220

<210> 3
<211> 220
<212> PRT
<213> Homo sapiens

<400> 3

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

Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp Lys Val
20 25 30

Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val Val Trp Glu
35 40 45

Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys
50 55 60

Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala
65 70 75 80

Arg Ala Leu Cys Val Ile Ala Leu Leu Val Ala Leu Phe Gly Leu Leu
85 90 95

Val Tyr Leu Ala Gly Ala Lys Cys Thr Thr Cys Val Glu Glu Lys Asp
100 105 110

Ser Lys Ala Arg Leu Val Leu Thr Ser Gly Ile Val Phe Val Ile Ser
115 120 125

Gly Val Leu Thr Leu Ile Pro Val Cys Trp Thr Ala His Ala Val Ile
130 135 140

Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys Arg Glu Leu
145 150 155 160

Gly Ala Ser Leu Tyr Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu
165 170 175

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly
180 185 190

Pro Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser
195 200 205

Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
210 215 220

<210> 4
<211> 207
<212> PRT
<213> Homo sapiens

<400> 4

Met Gln Ser Gly Thr His Trp Arg Val Leu Gly Leu Cys Leu Leu Ser
1 5 10 15

Val Gly Val Trp Gly Gln Asp Gly Asn Glu Glu Met Gly Gly Ile Thr
20 25 30

Gln Thr Pro Tyr Lys Val Ser Ile Ser Gly Thr Thr Val Ile Leu Thr
35 40 45

Cys Pro Gln Tyr Pro Gly Ser Glu Ile Leu Trp Gln His Asn Asp Lys
50 55 60

Asn Ile Gly Gly Asp Glu Asp Asp Lys Asn Ile Gly Ser Asp Glu Asp
65 70 75 80

His Leu Ser Leu Lys Glu Phe Ser Glu Leu Glu Gln Ser Gly Tyr Tyr
85 90 95

Val Cys Tyr Pro Arg Gly Ser Lys Pro Glu Asp Ala Asn Phe Tyr Leu
100 105 110

Tyr Leu Arg Ala Arg Val Cys Glu Asn Cys Met Glu Met Asp Val Met
115 120 125

Ser Val Ala Thr Ile Val Ile Val Asp Ile Cys Ile Thr Gly Gly Leu
130 135 140

Leu Leu Leu Val Tyr Tyr Trp Ser Lys Asn Arg Lys Ala Lys Ala Lys
145 150 155 160

Pro Val Thr Arg Gly Ala Gly Ala Gly Gly Arg Gln Arg Gly Gln Asn
165 170 175

Lys Glu Arg Pro Pro Pro Val Pro Asn Pro Asp Tyr Glu Pro Ile Arg
180 185 190

Lys Gly Gln Arg Asp Leu Tyr Ser Gly Leu Asn Gln Arg Arg Ile
195 200 205

<210> 5
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 5

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

Ser Val Lys Ile Ser Cys Lys Ala Thr Gly Tyr Thr Phe Ser Ser Tyr
20 25 30

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

Gly Glu Ile Leu Pro Gly Ser Gly Ser Thr Asn Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Lys Ala Thr Phe Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Asp Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ala
115

<210> 6
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 6

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

Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
20 25 30

Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
35 40 45

Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala Glu Glu Phe
50 55 60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65 70 75 80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys
85 90 95

Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser
115

<210> 7
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 7

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

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

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

Gly Glu Ile Tyr Pro Gly Ser Gly Asn Thr Tyr Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Ser Tyr Gly Ala Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 8
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 8

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser
115

<210> 9

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody fragment

<400> 9

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

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Val Ile Ser Trp Val Lys Gln Arg Thr Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Glu Ile Tyr Pro Gly Ser Gly Ser Thr Tyr Tyr Asn Glu Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Val Leu Leu Arg Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser
115

<210> 10
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 10

Gln Val His Leu Gln Gln Ser Gly Ser Glu Leu Arg Ser Pro Gly Ser
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Asp Phe Asp Ser Glu Val Phe Pro Phe
20 25 30

Ala Tyr Met Ser Trp Ile Arg Gln Lys Pro Gly His Gly Phe Glu Trp
35 40 45

Ile Gly Asp Ile Leu Pro Ser Ile Gly Arg Thr Ile Tyr Gly Glu Lys
50 55 60

Phe Glu Asp Lys Ala Thr Leu Asp Ala Asp Thr Val Ser Asn Thr Ala
65 70 75 80

Tyr Leu Glu Leu Asn Ser Leu Thr Ser Glu Asp Ser Ala Ile Tyr Tyr
85 90 95

Cys Ala Arg Gly Glu Gly Tyr Gly Ala Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 11
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 11

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

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
20 25 30

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
85 90 95

Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys

<210> 12
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 12

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

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

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

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Tyr Pro Pro Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 13
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 13

Asp Ile Val Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly

1 5 10 15
 Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asn Val Arg Thr Ala
 20 25 30
 Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile
 35 40 45
 Tyr Leu Ala Ser Asn Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly
 50 55 60
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser
 65 70 75 80
 Glu Asp Leu Ala Asp Tyr Phe Cys Leu Gln His Trp Asn Tyr Pro Leu
 85 90 95
 Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105

<210> 14
 <211> 113
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Antibody fragment

<400> 14

Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
 1 5 10 15
 Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
 20 25 30
 Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45
 Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60
 Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80
 Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
 85 90 95
 Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
 100 105 110

Lys

<210> 15
<211> 113
<212> PRT
<213> Artificial sequence

<220>
<223> Antibody fragment

<400> 15

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

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
20 25 30

Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
85 90 95

Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 16
<211> 112
<212> PRT
<213> Artificial sequence

<220>
<223> Antibody fragment

<400> 16

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

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
20 25 30

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

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr

65		70		75		80
Ile Ser Ser Val	Gln Ala Glu Asp Leu	Ala Val Tyr Tyr Cys	Lys Gln			
	85	90	95			
Ser Tyr Asn	Leu Tyr Thr Phe Gly	Gly Gly Thr Lys Leu	Glu Ile Lys			
	100	105	110			
<210> 17						
<211> 113						
<212> PRT						
<213> Artificial Sequence						
<220>						
<223> Antibody fragment						
<400> 17						
Asp Ile Val Met	Ser Gln Ser Pro Ser	Ser Leu Ala Val	Ser Val Gly			
1	5	10	15			
Glu Lys Val	Thr Met Ser Cys Lys	Ser Ser Gln Ser Leu	Leu Tyr Ser			
	20	25	30			
Ser Asn Gln	Lys Asn Tyr Leu	Ala Trp Tyr Gln Gln	Lys Pro Gly Gln			
	35	40	45			
Ser Pro Lys Leu	Leu Ile Tyr Trp Ala	Ser Thr Arg Glu	Ser Gly Val			
	50	55	60			
Pro Asp Arg Phe	Thr Gly Ser Gly Ser	Ala Thr Asp Phe	Thr Leu Thr			
65	70	75	80			
Ile Ser Ser Val	Gln Ala Glu Asp Leu	Ala Asp Tyr His	Cys Gly Gln			
	85	90	95			
Gly Tyr Ser	Tyr Pro Tyr Thr Phe	Gly Gly Gly Thr	Lys Leu Glu Ile			
	100	105	110			

Lys

<210> 18
 <211> 113
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Antibody fragment
 <400> 18

Asp Ile Val Met	Ser Gln Ser Pro Ser	Ser Leu Ala Val	Ser Val Gly
1	5	10	15
Glu Lys Val	Thr Met Ser Cys Lys	Ser Ser Gln Ser Leu	Leu Tyr Ser
	20	25	30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys

<210> 19
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 19

Asn Ile Val Met Thr Gln Ser Pro Lys Ser Met Ser Met Ser Val Gly
1 5 10 15

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

Val Ser Trp Tyr Gln Gln Lys Pro Glu Gln Ser Pro Lys Leu Leu Ile
35 40 45

Tyr Gly Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Ala Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Lys Ala
65 70 75 80

Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Tyr Pro Leu
85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105

<210> 20
<211> 117
<212> PRT
<213> Artificial Sequence

<220>

<223> Antibody fragment

<400> 20

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ile Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Tyr Gly Tyr Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 21

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody fragment

<400> 21

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Leu His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Val Tyr Ser
35 40 45

Thr Ser Asn Leu Pro Ser Gly Val Pro Ala Arg Phe Gly Gly Ser Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ile Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 22
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 22

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 23
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 23

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Cys Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 24
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 24

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Ile Ile Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Phe Tyr Cys
85 90 95

Ala Arg Asp Phe Gly Tyr Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 25
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 25

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Thr Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 26
<211> 117
<212> PRT
<213> Artificial sequence

<220>
<223> Antibody fragment

<400> 26

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Leu Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Ser Ser Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Tyr Gly Tyr Val Phe Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 27
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 27

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

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

Trp Phe Gln Leu Lys Pro Gly Thr Ser Pro Lys Leu Leu Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Asn Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 28
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 28

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Gly Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 29
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 29

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Ser Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 30
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 30

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

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Ser Ser Gly Tyr Thr Lys Tyr Asn Gln Lys Phe

50

55

60

Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Trp Gln Asp Tyr Asp Val Tyr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser
115

<210> 31
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 31

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr
20 25 30

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

Tyr Tyr Thr Ser Arg Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asn Thr Leu Pro Trp
85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 32
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 32

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Met
35 40 45

Gly Leu Ile Asn Pro Tyr Lys Gly Val Ser Thr Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Phe Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Gly Tyr Tyr Gly Asp Ser Asp Trp Tyr Phe Asp Val Trp
100 105 110

Gly Ala Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 33
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Antibody fragment

<400> 33

Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Lys Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
85 90 95

Thr Phe Ala Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 34

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

<220>
<223> Antibody fragment

<400> 34

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

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Gly Met Phe Trp Val Arg Gln Thr Pro Asp Lys Arg Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Arg Tyr Ser Arg Tyr Ile Tyr Tyr Pro Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Val Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Ile Tyr Tyr Cys
85 90 95

Ala Arg Arg Pro Leu Tyr Gly Ser Ser Pro Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser
115

<210> 35
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 35

Asp Ile Glu Asn Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser
1 5 10 15

Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Thr
20 25 30

Tyr Val His Trp Tyr Gln Gln Lys Ser Asn Thr Ser Pro Lys Leu Trp
35 40 45

Ile Tyr Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Gly Arg Val Ser
50 55 60

Gly Ser Gly Ser Gly Asn Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu
65 70 75 80

Ala Glu Asp Val Ala Thr Tyr Tyr Cys Phe Gln Gly Ser Gly Tyr Pro
85 90 95

Leu Thr Phe Gly Ser Gly Thr Lys Leu Glu Met Arg
100 105

<210> 36
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 36

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

Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met
20 25 30

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

Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp
50 55 60

Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Thr Ala Tyr Met Gln
65 70 75 80

Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg
85 90 95

Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 37
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody fragment

<400> 37

Asp Ile Gln Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1 5 10 15

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

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

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105

<210> 38
<211> 495
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 38

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu
130 135 140

Thr Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln
145 150 155 160

Ser Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln
 165 170 175
 Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr
 180 185 190
 Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr
 195 200 205
 Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val
 210 215 220
 Tyr Tyr Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly
 225 230 235 240
 Thr Lys Leu Glu Ile Lys Ser Gly Gly Gly Gly Ser Asp Ile Lys Leu
 245 250 255
 Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met
 260 265 270
 Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp
 275 280 285
 Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn
 290 295 300
 Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala
 305 310 315 320
 Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
 325 330 335
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr
 340 345 350
 Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 355 360 365
 Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
 370 375 380
 Ser Gly Gly Val Asp Asp Ile Gln Leu Thr Gln Ser Pro Ala Ile Met
 385 390 395 400
 Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser
 405 410 415
 Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro
 420 425 430

Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr
435 440 445

Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser
450 455 460

Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser
465 470 475 480

Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
485 490 495

<210> 39
<211> 520
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 39

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro
145 150 155 160

Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys
165 170 175

Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr
 180 185 190
 Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp
 195 200 205
 Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly
 210 215 220
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp
 225 230 235 240
 Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe
 245 250 255
 Gly Ser Gly Thr Lys Leu Glu Ile Lys Ser Gly Gly Gly Gly Ser Asp
 260 265 270
 Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser
 275 280 285
 Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr
 290 295 300
 Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly
 305 310 315 320
 Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys
 325 330 335
 Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met
 340 345 350
 Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala
 355 360 365
 Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr
 370 375 380
 Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly
 385 390 395 400
 Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu Thr Gln Ser Pro
 405 410 415
 Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg
 420 425 430
 Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly
 435 440 445

Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly
450 455 460

Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu
465 470 475 480

Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
485 490 495

Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu
500 505 510

Leu Lys His His His His His His
515 520

<210> 40
<211> 490
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 40

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu
130 135 140

Thr Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln
145 150 155 160

Ser Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln
 165 170 175
 Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr
 180 185 190
 Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr
 195 200 205
 Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val
 210 215 220
 Tyr Tyr Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly
 225 230 235 240
 Thr Lys Leu Glu Ile Lys Ser Gly Gly Gly Gly Ser Lys Leu Gln Gln
 245 250 255
 Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys
 260 265 270
 Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys
 275 280 285
 Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser
 290 295 300
 Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu
 305 310 315 320
 Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu
 325 330 335
 Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp
 340 345 350
 His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
 355 360 365
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 370 375 380
 Asp Ile Gln Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
 385 390 395 400
 Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met
 405 410 415
 Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
 420 425 430

Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser
435 440 445

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
450 455 460

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
465 470 475 480

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
485 490

<210> 41
<211> 515
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 41

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro
145 150 155 160

Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys
165 170 175

Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr
 180 185 190
 Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp
 195 200 205
 Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly
 210 215 220
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp
 225 230 235 240
 Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe
 245 250 255
 Gly Ser Gly Thr Lys Leu Glu Ile Lys Ser Gly Gly Gly Gly Ser Lys
 260 265 270
 Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys
 275 280 285
 Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His
 290 295 300
 Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile
 305 310 315 320
 Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 325 330 335
 Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 340 345 350
 Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr
 355 360 365
 Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu
 370 375 380
 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 385 390 395 400
 Gly Gly Ser Asp Ile Gln Leu Thr Gln Ser Pro Ala Ile Met Ser Ala
 405 410 415
 Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val
 420 425 430
 Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg
 435 440 445

Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe
450 455 460

Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met
465 470 475 480

Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn
485 490 495

Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys His His His
500 505 510

His His His
515

<210> 42
<211> 487
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 42

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

Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr
20 25 30

Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile
35 40 45

Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
115 120 125

Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ser Ile Met Ser
130 135 140

Val Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser
145 150 155 160

Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys
 165 170 175
 Leu Cys Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg
 180 185 190
 Phe Ser Gly Arg Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg
 195 200 205
 Val Ala Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn
 210 215 220
 Tyr Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Ser
 225 230 235 240
 Gly Gly Gly Gly Ser Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu
 245 250 255
 Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr
 260 265 270
 Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln
 275 280 285
 Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn
 290 295 300
 Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser
 305 310 315 320
 Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser
 325 330 335
 Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp
 340 345 350
 Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly
 355 360 365
 Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile
 370 375 380
 Gln Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys
 385 390 395 400
 Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp
 405 410 415
 Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr
 420 425 430

Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser
435 440 445

Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala
450 455 460

Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly
465 470 475 480

Ala Gly Thr Lys Leu Glu Leu
485

<210> 43
<211> 513
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 43

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe
35 40 45

Thr Gly Tyr Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu
50 55 60

Glu Trp Ile Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly
130 135 140

Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ser
145 150 155 160

Ile Met Ser Val Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala
165 170 175

Ser Ser Ser Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr
 180 185 190
 Ser Pro Lys Leu Cys Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val
 195 200 205
 Pro Ala Arg Phe Ser Gly Arg Gly Ser Gly Thr Ser Tyr Ser Leu Thr
 210 215 220
 Ile Ser Arg Val Ala Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
 225 230 235 240
 Arg Ser Asn Tyr Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
 245 250 255
 Ile Lys Ser Gly Gly Gly Gly Ser Asp Ile Lys Leu Gln Gln Ser Gly
 260 265 270
 Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr
 275 280 285
 Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg
 290 295 300
 Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly
 305 310 315 320
 Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr
 325 330 335
 Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser
 340 345 350
 Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr
 355 360 365
 Cys Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Val
 370 375 380
 Glu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val
 385 390 395 400
 Asp Asp Ile Gln Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro
 405 410 415
 Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr
 420 425 430
 Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile
 435 440 445

Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly
450 455 460

Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala
465 470 475 480

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu
485 490 495

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys His His His His His
500 505 510

His

<210> 44
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 44

Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr
20 25 30

Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly
115 120 125

Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu Thr Gln Ser
130 135 140

Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys
145 150 155 160

Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser
 165 170 175
 Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
 180 185 190
 Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
 195 200 205
 Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
 210 215 220
 Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu
 225 230 235 240
 Glu Leu Lys Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Gln Gln Ser
 245 250 255
 Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met Lys Ile Ser Cys Lys
 260 265 270
 Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp Val Lys Gln
 275 280 285
 Ser His Gly Lys Asn Leu Glu Trp Ile Gly Leu Ile Asn Pro Tyr Asn
 290 295 300
 Gly Gly Thr Ile Tyr Asn Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr
 305 310 315 320
 Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu Ser Leu Thr
 325 330 335
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Asp Tyr Gly Phe Val
 340 345 350
 Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
 355 360 365
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
 370 375 380
 Leu Thr Gln Ser Pro Ser Ile Met Ser Val Ser Pro Gly Glu Lys Val
 385 390 395 400
 Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His Trp Phe
 405 410 415
 Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Cys Ile Tyr Ser Thr Ser
 420 425 430

Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly Ser Gly
435 440 445

Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp Ala Ala
450 455 460

Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr Phe Gly
465 470 475 480

Gly Gly Thr Lys Leu Glu Ile Lys
485

<210> 45
<211> 513
<212> PRT
<213> Artificial Sequence

<220>
<223> Bispecific molecule

<400> 45

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly
130 135 140

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu
145 150 155 160

Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr
165 170 175

Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln
 180 185 190
 Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys
 195 200 205
 Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr
 210 215 220
 Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr
 225 230 235 240
 Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly
 245 250 255
 Thr Lys Leu Glu Leu Lys Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
 260 265 270
 Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met Lys Ile
 275 280 285
 Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp
 290 295 300
 Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile Gly Leu Ile Asn
 305 310 315 320
 Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe Lys Gly Lys Ala
 325 330 335
 Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu
 340 345 350
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Asp Tyr
 355 360 365
 Gly Phe Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
 370 375 380
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 385 390 395 400
 Asp Ile Val Leu Thr Gln Ser Pro Ser Ile Met Ser Val Ser Pro Gly
 405 410 415
 Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
 420 425 430
 His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Cys Ile Tyr
 435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys His His His His His
500 505 510

His

<210> 46
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker

<400> 46

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 47
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker

<400> 47

Val Glu Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Val Asp
1 5 10 15

<210> 48
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker

<400> 48

Ser Gly Gly Gly Gly Ser
1 5

<210> 49
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<223> Linker

<400> 49

Gly Gly Gly Gly Ser
1 5

<210> 50

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Linker

<400> 50

Val Glu Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly
1 5 10 15

Val Asp

<210> 51

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion signal

<400> 51

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser

<210> 52

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion signal

<400> 52

Met Asn Ser Gly Leu Gln Leu Val Phe Phe Val Leu Thr Leu Lys Gly
1 5 10 15

Ile Gln Gly

<210> 53

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion signal

<400> 53

Met Asn Phe Gly Leu Ser Leu Ile Phe Leu Ala Leu Ile Leu Lys Gly
1 5 10 15

Val Gln Cys

<210> 54

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion signal

<400> 54

Met Glu Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
1 5 10 15

Val His Ser

<210> 55

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion signal

<400> 55

Met Gly Trp Leu Trp Asn Leu Leu Phe Leu Met Ala Ala Ala Gln Ser
1 5 10 15

Ala Gln Ala

<210> 56

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 56

tggctctgtg tcgacactgt g

21

<210> 57

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 57

gtgtacatgt tagctgtgga c

21

<210> 58
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<400> 58
tgacactggc aaaacaatgc a

21

<210> 59
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<400> 59
ggtccttttc accagcaagc t

21

<210> 60
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 60

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe
35 40 45

Thr Gly Tyr Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu
50 55 60

Glu Trp Ile Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly

130

135

140

Gly Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ser
145 150 155 160

Ile Met Ser Val Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala
165 170 175

Ser Ser Ser Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr
180 185 190

Ser Pro Lys Leu Leu Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val
195 200 205

Pro Ala Arg Phe Ser Gly Arg Gly Ser Gly Thr Ser Tyr Ser Leu Thr
210 215 220

Ile Ser Arg Val Ala Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
225 230 235 240

Arg Ser Asn Tyr Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
245 250 255

Ile Lys Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly
260 265 270

Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr
275 280 285

Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg
290 295 300

Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly
305 310 315 320

Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr
325 330 335

Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser
340 345 350

Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr
355 360 365

Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly
370 375 380

Gly Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly
385 390 395 400

Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro
405 410 415

Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr
420 425 430

Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile
435 440 445

Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly
450 455 460

Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala
465 470 475 480

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu
485 490 495

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
500 505

<210> 61
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 61

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe
35 40 45

Thr Gly Tyr Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu
50 55 60

Glu Trp Ile Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly

130	135	140													
Gly 145	Ser	Gly	Gly	Gly	Gly 150	Ser	Gln	Ile	Val	Leu 155	Thr	Gln	Ser	Pro	Ser 160
Ile	Met	Ser	Val	Ser 165	Pro	Gly	Glu	Lys	Val 170	Thr	Ile	Thr	Cys	Ser 175	Ala
Ser	Ser	Ser	Val 180	Ser	Tyr	Met	His	Trp 185	Phe	Gln	Gln	Lys	Pro 190	Gly	Thr
Ser	Pro	Lys 195	Leu	Trp	Ile	Tyr	Ser 200	Thr	Ser	Asn	Leu	Ala 205	Ser	Gly	Val
Pro	Ala 210	Arg	Phe	Ser	Gly	Arg 215	Gly	Ser	Gly	Thr	Ser 220	Tyr	Ser	Leu	Thr
Ile 225	Ser	Arg	Val	Ala	Ala 230	Glu	Asp	Ala	Ala	Thr 235	Tyr	Tyr	Cys	Gln	Gln 240
Arg	Ser	Asn	Tyr	Pro 245	Pro	Trp	Thr	Phe	Gly 250	Gly	Gly	Thr	Lys	Leu 255	Glu
Ile	Lys	Ser	Gly 260	Gly	Gly	Gly	Ser	Gln 265	Val	Gln	Leu	Gln	Gln 270	Ser	Gly
Ala	Glu	Leu 275	Ala	Arg	Pro	Gly	Ala 280	Ser	Val	Lys	Met	Ser 285	Cys	Lys	Thr
Ser	Gly 290	Tyr	Thr	Phe	Thr	Arg 295	Tyr	Thr	Met	His	Trp 300	Val	Lys	Gln	Arg
Pro 305	Gly	Gln	Gly	Leu	Glu 310	Trp	Ile	Gly	Tyr	Ile 315	Asn	Pro	Ser	Arg	Gly 320
Tyr	Thr	Asn	Tyr	Asn 325	Gln	Lys	Phe	Lys	Asp 330	Lys	Ala	Thr	Leu	Thr 335	Thr
Asp	Lys	Ser	Ser 340	Ser	Thr	Ala	Tyr	Met 345	Gln	Leu	Ser	Ser	Leu 350	Thr	Ser
Glu	Asp	Ser 355	Ala	Val	Tyr	Tyr	Cys 360	Ala	Arg	Tyr	Tyr	Asp 365	Asp	His	Tyr
Ser	Leu 370	Asp	Tyr	Trp	Gly	Gln 375	Gly	Thr	Thr	Leu	Thr 380	Val	Ser	Ser	Gly
Gly 385	Gly	Gly	Ser	Gly	Gly 390	Ser	Gly	Gly	Ser	Gly 395	Gly	Ser	Gly	Gly	Gly 400
Ser	Gln	Ile	Val	Leu 405	Thr	Gln	Ser	Pro	Ala 410	Ile	Met	Ser	Ala	Ser 415	Pro

Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr
420 425 430

Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile
435 440 445

Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly
450 455 460

Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala
465 470 475 480

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu
485 490 495

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
500 505

<210> 62
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 62

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Met Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe
35 40 45

Thr Gly Tyr Thr Met Asn Trp Val Lys Gln Ser His Gly Lys Asn Leu
50 55 60

Glu Trp Ile Gly Leu Ile Asn Pro Tyr Asn Gly Gly Thr Ile Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Glu Leu Leu Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Asp Tyr Gly Phe Val Leu Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly

130

135

140

Gly Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ser
145 150 155 160

Ile Met Ser Val Ser Pro Gly Glu Lys Val Thr Ile Thr Cys Ser Ala
165 170 175

Ser Ser Ser Val Ser Tyr Met His Trp Phe Gln Gln Lys Pro Gly Thr
180 185 190

Ser Pro Lys Leu Ser Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val
195 200 205

Pro Ala Arg Phe Ser Gly Arg Gly Ser Gly Thr Ser Tyr Ser Leu Thr
210 215 220

Ile Ser Arg Val Ala Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln
225 230 235 240

Arg Ser Asn Tyr Pro Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
245 250 255

Ile Lys Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly
260 265 270

Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr
275 280 285

Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg
290 295 300

Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly
305 310 315 320

Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr
325 330 335

Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser
340 345 350

Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr
355 360 365

Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly
370 375 380

Gly Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly
385 390 395 400

Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro
405 410 415

Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr
420 425 430

Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile
435 440 445

Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly
450 455 460

Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala
465 470 475 480

Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu
485 490 495

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
500 505

<210> 63
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 63

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly

130					135					140					
Gly 145	Ser	Gly	Gly	Ser	Gly 150	Gly	Ser	Gly	Gly	Gly 155	Ser	Gln	Ile	Val	Leu 160
Thr	Gln	Ser	Pro	Ala 165	Ile	Met	Ser	Ala	Ser 170	Pro	Gly	Glu	Lys	Val 175	Thr
Met	Thr	Cys	Arg 180	Ala	Ser	Ser	Ser	Val 185	Ser	Tyr	Met	Asn	Trp 190	Tyr	Gln
Gln	Lys	Ser 195	Gly	Thr	Ser	Pro	Lys 200	Arg	Trp	Ile	Tyr	Asp 205	Thr	Ser	Lys
Val	Ala 210	Ser	Gly	Val	Pro	Tyr 215	Arg	Phe	Ser	Gly	Ser 220	Gly	Ser	Gly	Thr
Ser	Tyr	Ser	Leu	Thr	Ile 230	Ser	Ser	Met	Glu	Ala 235	Glu	Asp	Ala	Ala	Thr 240
Tyr	Tyr	Cys	Gln	Gln 245	Trp	Ser	Ser	Asn	Pro 250	Leu	Thr	Phe	Gly	Ala 255	Gly
Thr	Lys	Leu	Glu 260	Leu	Lys	Ser	Gly	Gly 265	Gly	Gly	Ser	Glu	Val 270	Gln	Leu
Gln	Gln	Ser 275	Gly	Pro	Glu	Leu	Val 280	Lys	Pro	Gly	Ala	Ser 285	Met	Lys	Ile
Ser	Cys 290	Lys	Ala	Ser	Gly	Tyr 295	Ser	Phe	Thr	Gly	Tyr 300	Thr	Met	Asn	Trp
Val 305	Lys	Gln	Ser	His	Gly 310	Lys	Asn	Leu	Glu	Trp 315	Ile	Gly	Leu	Ile	Asn 320
Pro	Tyr	Asn	Gly	Gly 325	Thr	Ile	Tyr	Asn	Gln 330	Lys	Phe	Lys	Gly	Lys 335	Ala
Thr	Leu	Thr	Val 340	Asp	Lys	Ser	Ser	Ser 345	Thr	Ala	Tyr	Met	Glu 350	Leu	Leu
Ser	Leu	Thr 355	Ser	Glu	Asp	Ser	Ala 360	Val	Tyr	Tyr	Cys	Ala 365	Arg	Asp	Tyr
Gly	Phe	Val	Leu	Asp	Tyr	Trp 375	Gly	Gln	Gly	Thr	Thr 380	Leu	Thr	Val	Ser
Ser 385	Gly	Gly	Gly	Gly	Ser 390	Gly	Gly	Gly	Gly	Ser 395	Gly	Gly	Gly	Gly	Ser 400
Gln	Ile	Val	Leu	Thr 405	Gln	Ser	Pro	Ser	Ile 410	Met	Ser	Val	Ser	Pro 415	Gly

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
420 425 430

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Leu Ile Tyr
435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
500 505

<210> 64
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 64

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly

130	135	140														
Gly 145	Ser	Gly	Gly	Ser	Gly 150	Gly	Ser	Gly	Gly	Gly 155	Ser	Gln	Ile	Val	Leu 160	
Thr	Gln	Ser	Pro	Ala 165	Ile	Met	Ser	Ala	Ser 170	Pro	Gly	Glu	Lys	Val 175	Thr	
Met	Thr	Cys	Arg 180	Ala	Ser	Ser	Ser	Val 185	Ser	Tyr	Met	Asn	Trp 190	Tyr	Gln	
Gln	Lys	Ser 195	Gly	Thr	Ser	Pro	Lys 200	Arg	Trp	Ile	Tyr	Asp 205	Thr	Ser	Lys	
Val 210	Ala	Ser	Gly	Val	Pro	Tyr 215	Arg	Phe	Ser	Gly	Ser 220	Gly	Ser	Gly	Thr	
Ser 225	Tyr	Ser	Leu	Thr	Ile 230	Ser	Ser	Met	Glu	Ala 235	Glu	Asp	Ala	Ala	Thr 240	
Tyr	Tyr	Cys	Gln	Gln 245	Trp	Ser	Ser	Asn	Pro 250	Leu	Thr	Phe	Gly	Ala 255	Gly	
Thr	Lys	Leu	Glu 260	Leu	Lys	Ser	Gly	Gly 265	Gly	Gly	Ser	Glu	Val 270	Gln	Leu	
Gln	Gln	Ser 275	Gly	Pro	Glu	Leu	Val 280	Lys	Pro	Gly	Ala	Ser 285	Met	Lys	Ile	
Ser	Cys 290	Lys	Ala	Ser	Gly	Tyr 295	Ser	Phe	Thr	Gly	Tyr 300	Thr	Met	Asn	Trp	
Val 305	Lys	Gln	Ser	His	Gly 310	Lys	Asn	Leu	Glu	Trp 315	Ile	Gly	Leu	Ile	Asn 320	
Pro	Tyr	Asn	Gly	Gly 325	Thr	Ile	Tyr	Asn	Gln 330	Lys	Phe	Lys	Gly	Lys 335	Ala	
Thr	Leu	Thr	Val 340	Asp	Lys	Ser	Ser	Ser 345	Thr	Ala	Tyr	Met	Glu 350	Leu	Leu	
Ser	Leu	Thr 355	Ser	Glu	Asp	Ser	Ala 360	Val	Tyr	Tyr	Cys	Ala 365	Arg	Asp	Tyr	
Gly	Phe	Val	Leu	Asp	Tyr	Trp 375	Gly	Gln	Gly	Thr	Thr 380	Leu	Thr	Val	Ser	
Ser 385	Gly	Gly	Gly	Gly	Ser 390	Gly	Gly	Gly	Gly	Ser 395	Gly	Gly	Gly	Gly	Ser 400	
Gln	Ile	Val	Leu	Thr 405	Gln	Ser	Pro	Ser	Ile 410	Met	Ser	Val	Ser	Pro 415	Gly	

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
420 425 430

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr
435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
500 505

<210> 65
<211> 507
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 65

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly

130

135

140

Gly 145 Ser Gly Gly Ser Gly 150 Gly Ser Gly Gly Gly 155 Ser Gln Ile Val 160 Leu

Thr Gln Ser Pro Ala 165 Ile Met Ser Ala Ser 170 Pro Gly Glu Lys Val 175 Thr

Met Thr Cys Arg 180 Ala Ser Ser Ser Val 185 Ser Tyr Met Asn Trp 190 Tyr Gln

Gln Lys Ser 195 Gly Thr Ser Pro Lys 200 Arg Trp Ile Tyr Asp 205 Thr Ser Lys

Val Ala 210 Ser Gly Val Pro Tyr 215 Arg Phe Ser Gly Ser 220 Gly Ser Gly Thr

Ser Tyr Ser Leu Thr Ile 230 Ser Ser Met Glu Ala 235 Glu Asp Ala Ala Thr 240

Tyr Tyr Cys Gln Gln 245 Trp Ser Ser Asn Pro 250 Leu Thr Phe Gly Ala 255 Gly

Thr Lys Leu Glu 260 Leu Lys Ser Gly Gly 265 Gly Gly Ser Glu Val 270 Gln Leu

Gln Gln Ser 275 Gly Pro Glu Leu Val 280 Lys Pro Gly Ala Ser 285 Met Lys Ile

Ser Cys 290 Lys Ala Ser Gly Tyr 295 Ser Phe Thr Gly Tyr 300 Thr Met Asn Trp

Val 305 Lys Gln Ser His Gly 310 Lys Asn Leu Glu Trp 315 Ile Gly Leu Ile Asn 320

Pro Tyr Asn Gly 325 Gly Thr Ile Tyr Asn Gln 330 Lys Phe Lys Gly Lys 335 Ala

Thr Leu Thr Val 340 Asp Lys Ser Ser Ser 345 Thr Ala Tyr Met Glu 350 Leu Leu

Ser Leu Thr 355 Ser Glu Asp Ser Ala 360 Val Tyr Tyr Cys Ala 365 Arg Asp Tyr

Gly Phe Val 370 Leu Asp Tyr Trp 375 Gly Gln Gly Thr Thr 380 Leu Thr Val Ser

Ser 385 Gly Gly Gly Gly Ser 390 Gly Gly Gly Gly Ser 395 Gly Gly Gly Gly Ser 400

Gln Ile Val 405 Leu Thr Gln Ser Pro Ser Ile 410 Met Ser Val Ser Pro 415 Gly

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
420 425 430

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Ser Ile Tyr
435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
500 505

<210> 66
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 66

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30

Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80

Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95

Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
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Tyr Phe Cys Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly
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Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly

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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
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Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
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Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
180 185 190

Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
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Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
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Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
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Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
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Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Ser Gly
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Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala
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Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr
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Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly
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Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr
325 330 335

Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser
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Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
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Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
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Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
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Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu
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Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
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Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
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Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly
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Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp
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His His
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Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Cys Leu
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Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
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Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
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Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
Page 57

100					105					110					
Tyr	Phe	Cys ₁₁₅	Ala	Arg	Leu	Gly	Phe ₁₂₀	Gly	Asn	Ala	Met	Asp ₁₂₅	Tyr	Trp	Gly
Gln	Gly ₁₃₀	Thr	Ser	Val	Thr	Val ₁₃₅	Ser	Ser	Gly	Gly	Gly ₁₄₀	Gly	Ser	Gly	Gly
Gly ₁₄₅	Gly	Ser	Gly	Gly	Gly ₁₅₀	Gly	Ser	Gly	Gly	Gly ₁₅₅	Gly	Ser	Asp	Ile	Val ₁₆₀
Met	Thr	Gln	Ser	Pro ₁₆₅	Ser	Ser	Leu	Thr	Val ₁₇₀	Thr	Ala	Gly	Glu	Lys ₁₇₅	Val
Thr	Met	Ser	Cys ₁₈₀	Lys	Ser	Ser	Gln	Ser ₁₈₅	Leu	Leu	Asn	Ser	Gly ₁₉₀	Asn	Gln
Lys	Asn	Tyr ₁₉₅	Leu	Thr	Trp	Tyr	Gln ₂₀₀	Gln	Lys	Pro	Gly	Gln ₂₀₅	Pro	Pro	Lys
Leu	Leu ₂₁₀	Ile	Tyr	Trp	Ala	Ser ₂₁₅	Thr	Arg	Glu	Ser	Gly ₂₂₀	Val	Pro	Asp	Arg
Phe ₂₂₅	Thr	Gly	Ser	Gly	Ser ₂₃₀	Gly	Thr	Asp	Phe	Thr ₂₃₅	Leu	Thr	Ile	Ser	Ser ₂₄₀
Val	Gln	Ala	Glu	Asp ₂₄₅	Leu	Ala	Val	Tyr	Tyr ₂₅₀	Cys	Gln	Asn	Asp	Tyr ₂₅₅	Ser
Tyr	Pro	Leu	Thr ₂₆₀	Phe	Gly	Cys	Gly	Thr ₂₆₅	Lys	Leu	Glu	Leu	Lys ₂₇₀	Ser	Gly
Gly	Gly	Gly ₂₇₅	Ser	Gln	Val	Gln	Leu ₂₈₀	Gln	Gln	Ser	Gly	Ala ₂₈₅	Glu	Leu	Ala
Arg	Pro ₂₉₀	Gly	Ala	Ser	Val	Lys ₂₉₅	Met	Ser	Cys	Lys	Thr ₃₀₀	Ser	Gly	Tyr	Thr
Phe ₃₀₅	Thr	Arg	Tyr	Thr	Met ₃₁₀	His	Trp	Val	Lys	Gln ₃₁₅	Arg	Pro	Gly	Gln	Gly ₃₂₀
Leu	Glu	Trp	Ile	Gly ₃₂₅	Tyr	Ile	Asn	Pro	Ser ₃₃₀	Arg	Gly	Tyr	Thr	Asn ₃₃₅	Tyr
Asn	Gln	Lys	Phe ₃₄₀	Lys	Asp	Lys	Ala	Thr ₃₄₅	Leu	Thr	Thr	Asp	Lys ₃₅₀	Ser	Ser
Ser	Thr	Ala ₃₅₅	Tyr	Met	Gln	Leu	Ser ₃₆₀	Ser	Leu	Thr	Ser	Glu ₃₆₅	Asp	Ser	Ala
Val	Tyr ₃₇₀	Tyr	Cys	Ala	Arg	Tyr ₃₇₅	Tyr	Asp	Asp	His	Tyr ₃₈₀	Ser	Leu	Asp	Tyr

Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
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Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
450 455 460

Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly
465 470 475 480

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp
485 490 495

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His His
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Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
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Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn

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Thr	Ala	Tyr	Met 100	Gln	Leu	Ser	Ser	Pro 105	Thr	Ser	Glu	Asp	Ser 110	Ala	Val
Tyr	Tyr	Cys 115	Thr	Arg	Ser	Trp	Arg 120	Gly	Asn	Ser	Phe	Asp 125	Tyr	Trp	Gly
Gln	Gly 130	Thr	Thr	Leu	Thr	Val 135	Ser	Ser	Gly	Gly	Gly 140	Gly	Ser	Gly	Gly
Gly 145	Gly	Ser	Gly	Gly	Gly 150	Gly	Ser	Gly	Gly	Gly 155	Gly	Ser	Asp	Ile	Val 160
Met	Thr	Gln	Ser	Pro 165	Ser	Ser	Leu	Thr	Val 170	Thr	Ala	Gly	Glu	Lys 175	Val
Thr	Met	Ser	Cys 180	Lys	Ser	Ser	Gln	Ser 185	Leu	Leu	Asn	Ser	Gly 190	Asn	Gln
Lys	Asn	Tyr 195	Leu	Thr	Trp	Tyr	Gln 200	Gln	Lys	Pro	Gly	Gln 205	Pro	Pro	Lys
Leu	Leu 210	Ile	Tyr	Trp	Ala	Ser 215	Thr	Arg	Glu	Ser	Gly 220	Val	Pro	Asp	Arg
Phe 225	Thr	Gly	Ser	Gly	Ser 230	Gly	Thr	Asp	Phe	Thr 235	Leu	Thr	Ile	Ser	Ser 240
Val	Gln	Ala	Glu	Asp 245	Leu	Ala	Val	Tyr	Tyr 250	Cys	Gln	Asn	Asp	Tyr 255	Ser
Tyr	Pro	Phe	Thr 260	Phe	Gly	Ser	Gly	Thr 265	Lys	Leu	Glu	Ile	Lys 270	Ser	Gly
Gly	Gly	Gly 275	Ser	Gln	Val	Gln	Leu 280	Gln	Gln	Ser	Gly	Ala 285	Glu	Leu	Ala
Arg	Pro 290	Gly	Ala	Ser	Val	Lys 295	Met	Ser	Cys	Lys	Thr 300	Ser	Gly	Tyr	Thr
Phe 305	Thr	Arg	Tyr	Thr	Met 310	His	Trp	Val	Lys	Gln 315	Arg	Pro	Gly	Gln	Gly 320
Leu	Glu	Trp	Ile	Gly 325	Tyr	Ile	Asn	Pro	Ser 330	Arg	Gly	Tyr	Thr	Asn 335	Tyr
Asn	Gln	Lys	Phe 340	Lys	Asp	Lys	Ala	Thr 345	Leu	Thr	Thr	Asp	Lys 350	Ser	Ser

Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
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Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
370 375 380

Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
385 390 395 400

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
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Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu
420 425 430

Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
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Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
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Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly
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Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp
485 490 495

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Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
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Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
Page 61

35

40

45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Cys Leu
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Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
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Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
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Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
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Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
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Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
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Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
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Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
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Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
210 215 220

Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225 230 235 240

Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
245 250 255

Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Ser Gly
260 265 270

Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala
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Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr
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Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly
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Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr
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Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser
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Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
355 360 365

Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
370 375 380

Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
385 390 395 400

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
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Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu
420 425 430

Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
435 440 445

Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
450 455 460

Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly
465 470 475 480

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp
485 490 495

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His His
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	30	Leu	Lys
	Lys		
Pro	Gly	Glu	Thr
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	40	Ser	Cys
	Lys	Ala	Ser
	45	Gly	Tyr
	Thr	Phe	
Thr	Asn	Tyr	Gly
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	55	Val	Lys
	Gln	Ala	Pro
	60	Gly	Lys
	Gly	Leu	
Lys	Trp	Met	Gly
65	Trp	Ile	Asn
	70	Thr	Asn
	75	Gly	Glu
	Pro	Thr	Tyr
	80	Ala	
Glu	Glu	Phe	Lys
	85	Arg	Phe
	90	Ala	Phe
	Ser	Leu	Glu
	95	Thr	Ser
	Ala	Ser	
Thr	Ala	Tyr	Leu
	100	Gln	Ile
	105	Asn	Asn
	Leu	Lys	Asn
	Glu	Asp	Thr
	110	Ala	Thr
Tyr	Phe	Cys	Ala
	115	Arg	Leu
	Gly	Phe	Gly
	120	Asn	Ala
	Met	Asp	Tyr
	125	Trp	Gly
Gln	Gly	Thr	Ser
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	135	Ser	Ser
	Gly	Gly	Gly
	140	Gly	Gly
	Ser	Gly	Gly
Gly	Gly	Ser	Gly
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	150	Ser	Asp
	155	Ile	Val
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Met	Thr	Gln	Ser
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	Ser	Ser	Leu
	170	Thr	Val
	Thr	Ala	Gly
	Glu	Lys	Val
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	Ser	Ser	Gln
	185	Ser	Leu
	Leu	Asn	Ser
	190	Gly	Asn
	Gln		
Lys	Asn	Tyr	Leu
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	Tyr	Gln	Gln
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	Arg	Glu	Ser
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Phe	Thr	Gly	Ser
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	230	Thr	Asp
	Phe	Thr	Leu
	235	Thr	Ile
	Ser	Ser	
Val	Gln	Ala	Glu
	245	Asp	Leu
	Ala	Val	Tyr
	250	Tyr	Cys
	Gln	Asn	Asp
	255	Tyr	Ser
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	Ala	Gly	Thr
	265	Lys	Leu
	Glu	Leu	Lys
	270	Ser	Gly
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	275	Gln	Val
	Gln	Leu	Gln
	280	Gln	Ser
	Gly	Ala	Glu
	285	Leu	Ala

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Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr
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Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser
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Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
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Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
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Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
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Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
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Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
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Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
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Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
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Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
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Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
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Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Ser Gly
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 Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
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 Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
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Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val
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Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
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Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
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Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
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 Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr
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 Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
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 Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
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 Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
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 Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
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 485 490 495

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His His
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Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
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Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
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Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
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Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
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Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
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Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
180 185 190

Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala
 275 280 285
 Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr
 290 295 300
 Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Cys
 305 310 315 320
 Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr
 325 330 335
 Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser
 340 345 350
 Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala
 355 360 365
 Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr
 370 375 380
 Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser
 385 390 395 400
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
 405 410 415
 Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu
 420 425 430
 Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn
 435 440 445
 Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp
 450 455 460

Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly
465 470 475 480

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp
485 490 495

Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe
500 505 510

Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly Ser His His His His
515 520 525

His His
530

<210> 74
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 74

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30

Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80

Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95

Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
100 105 110

Tyr Phe Cys Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val
145 150 155 160

Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
 165 170 175
 Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
 180 185 190
 Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 305 310 315 320
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 325 330 335
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 340 345 350
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 355 360 365
 Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
 370 375 380
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly
 385 390 395 400
 Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
 405 410 415
 Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
 420 425 430

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
435 440 445

Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
450 455 460

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
465 470 475 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 75
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 75

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30

Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Cys Leu
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80

Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95

Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
100 105 110

Tyr Phe Cys Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
 145 150 155 160
 Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
 165 170 175
 Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
 180 185 190
 Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 305 310 315 320
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 325 330 335
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 340 345 350
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 355 360 365
 Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
 370 375 380
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
405 410 415

Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
420 425 430

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
435 440 445

Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
450 455 460

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
465 470 475 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 76
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 76

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
 115 120 125
 Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
 145 150 155 160
 Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
 165 170 175
 Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
 180 185 190
 Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 305 310 315 320
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 325 330 335
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 340 345 350
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 355 360 365

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
370 375 380

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
405 410 415

Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
420 425 430

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
435 440 445

Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
450 455 460

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
465 470 475 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 77
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 77

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Cys Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
 65 70 75 80
 Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95
 Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
 115 120 125
 Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
 145 150 155 160
 Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
 165 170 175
 Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
 180 185 190
 Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys Leu Glu Ile Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 305 310 315 320
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 325 330 335

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
340 345 350

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
355 360 365

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
370 375 380

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
405 410 415

Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
420 425 430

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
435 440 445

Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
450 455 460

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
465 470 475 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 78
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 78

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30

Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 35 40 45
 Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
 50 55 60
 Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
 65 70 75 80
 Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
 85 90 95
 Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
 100 105 110
 Tyr Phe Cys Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly
 115 120 125
 Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val
 145 150 155 160
 Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
 165 170 175
 Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
 180 185 190
 Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
 195 200 205
 Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
 210 215 220
 Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
 225 230 235 240
 Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
 245 250 255
 Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Ser Gly
 260 265 270
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300

Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
305 310 315 320

Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
325 330 335

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
340 345 350

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
355 360 365

Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly
370 375 380

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
405 410 415

Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
420 425 430

Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
435 440 445

Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
450 455 460

Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
465 470 475 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 79
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 79

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15
Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
20 25 30
Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45
Thr Asn Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Cys Leu
50 55 60
Lys Trp Met Gly Trp Ile Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80
Glu Glu Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95
Thr Ala Tyr Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
100 105 110
Tyr Phe Cys Ala Arg Leu Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly
115 120 125
Gln Gly Thr Ser Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140
Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
145 150 155 160
Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
165 170 175
Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
180 185 190
Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
195 200 205
Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
210 215 220
Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225 230 235 240
Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser
245 250 255
Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Ser Gly
260 265 270

Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 275 280 285
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 290 295 300
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 305 310 315 320
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 325 330 335
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 340 345 350
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 355 360 365
 Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly
 370 375 380
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 385 390 395 400
 Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Ala
 405 410 415
 Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser
 420 425 430
 Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro
 435 440 445
 Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr
 450 455 460
 Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp
 465 470 475 480
 Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
 485 490 495
 Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
 500 505 510
 Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
 515 520 525
 Ser His His His His His His
 530 535

<210> 80
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 80

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val
145 150 155 160

Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
165 170 175

Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
180 185 190

Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
195 200 205

Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg
210 215 220

Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
225 230 235 240

Val Gln Ala Glu Asp₂₄₅ Leu Ala Val Tyr Tyr₂₅₀ Cys Gln Asn Asp Tyr₂₅₅ Ser
 Tyr Pro Phe Thr₂₆₀ Phe Gly Ser Gly Thr₂₆₅ Lys Leu Glu Ile Lys₂₇₀ Ser Gly
 Gly Gly Gly₂₇₅ Ser Gln Ile Val Leu₂₈₀ Thr Gln Ser Pro Ala₂₈₅ Ile Met Ser
 Ala Ser₂₉₀ Pro Gly Glu Lys Val₂₉₅ Thr Met Thr Cys Arg₃₀₀ Ala Ser Ser Ser
 Val₃₀₅ Ser Tyr Met Asn Trp₃₁₀ Tyr Gln Gln Lys Ser₃₁₅ Gly Thr Ser Pro Lys₃₂₀
 Arg Trp Ile Tyr Asp₃₂₅ Thr Ser Lys Val Ala₃₃₀ Ser Gly Val Pro Tyr₃₃₅ Arg
 Phe Ser Gly Ser₃₄₀ Gly Ser Gly Thr Ser₃₄₅ Tyr Ser Leu Thr Ile₃₅₀ Ser Ser
 Met Glu Ala₃₅₅ Glu Asp Ala Ala Thr₃₆₀ Tyr Tyr Cys Gln Gln₃₆₅ Trp Ser Ser
 Asn Pro₃₇₀ Leu Thr Phe Gly Cys₃₇₅ Gly Thr Lys Leu Glu₃₈₀ Leu Lys Gly Gly
 Gly₃₈₅ Gly Ser Gly Gly Gly₃₉₀ Gly Ser Gly Gly Gly₃₉₅ Gly Ser Gly Gly Gly₄₀₀
 Gly Ser Gly Gly Gly₄₀₅ Gly Ser Gln Val Gln₄₁₀ Leu Gln Gln Ser Gly₄₁₅ Ala
 Glu Leu Ala Arg₄₂₀ Pro Gly Ala Ser Val₄₂₅ Lys Met Ser Cys Lys₄₃₀ Thr Ser
 Gly Tyr Thr₄₃₅ Phe Thr Arg Tyr Thr₄₄₀ Met His Trp Val Lys₄₄₅ Gln Arg Pro
 Gly Gln Cys Leu Glu Trp Ile₄₅₅ Gly Tyr Ile Asn Pro₄₆₀ Ser Arg Gly Tyr
 Thr₄₆₅ Asn Tyr Asn Gln Lys₄₇₀ Phe Lys Asp Lys Ala₄₇₅ Thr Leu Thr Thr Asp₄₈₀
 Lys Ser Ser Ser Thr₄₈₅ Ala Tyr Met Gln Leu₄₉₀ Ser Ser Leu Thr Ser₄₉₅ Glu
 Asp Ser Ala Val₅₀₀ Tyr Tyr Cys Ala Arg₅₀₅ Tyr Tyr Asp Asp His₅₁₀ Tyr Ser

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 81
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 81

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Cys Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val
145 150 155 160

Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val
165 170 175

Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln
180 185 190

Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
195 200 205

Leu 210 Leu Ile Tyr Trp Ala Ser 215 Thr Arg Glu Ser Gly 220 Val Pro Asp Arg
 Phe 225 Thr Gly Ser Gly Ser 230 Gly Thr Asp Phe Thr 235 Leu Thr Ile Ser Ser 240
 Val Gln Ala Glu Asp 245 Leu Ala Val Tyr Tyr 250 Cys Gln Asn Asp Tyr 255 Ser
 Tyr Pro Phe Thr 260 Phe Gly Cys Gly Thr 265 Lys Leu Glu Ile Lys 270 Ser Gly
 Gly Gly Gly Ser Gln Ile Val Leu 280 Thr Gln Ser Pro Ala 285 Ile Met Ser
 Ala Ser 290 Pro Gly Glu Lys Val 295 Thr Met Thr Cys Arg 300 Ala Ser Ser Ser
 Val 305 Ser Tyr Met Asn Trp 310 Tyr Gln Gln Lys Ser 315 Gly Thr Ser Pro Lys 320
 Arg Trp Ile Tyr Asp 325 Thr Ser Lys Val Ala 330 Ser Gly Val Pro Tyr 335 Arg
 Phe Ser Gly Ser 340 Gly Ser Gly Thr Ser 345 Tyr Ser Leu Thr Ile Ser Ser 350
 Met Glu Ala 355 Glu Asp Ala Ala Thr 360 Tyr Tyr Cys Gln Gln 365 Trp Ser Ser
 Asn Pro 370 Leu Thr Phe Gly Cys 375 Gly Thr Lys Leu Glu 380 Leu Lys Gly Gly
 Gly 385 Gly Ser Gly Gly Gly 390 Gly Ser Gly Gly Gly 395 Gly Ser Gly Gly Gly 400
 Gly Ser Gly Gly Gly 405 Gly Ser Gln Val Gln 410 Leu Gln Gln Ser Gly 415 Ala
 Glu Leu Ala Arg 420 Pro Gly Ala Ser Val 425 Lys Met Ser Cys Lys 430 Thr Ser
 Gly Tyr Thr 435 Phe Thr Arg Tyr Thr 440 Met His Trp Val Lys 445 Gln Arg Pro
 Gly Gln 450 Cys Leu Glu Trp Ile 455 Gly Tyr Ile Asn Pro 460 Ser Arg Gly Tyr
 Thr 465 Asn Tyr Asn Gln Lys 470 Phe Lys Asp Lys Ala 475 Thr Leu Thr Thr Asp 480

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
485 490 495

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser
500 505 510

Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 82
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<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 82

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Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys
115 120 125

Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gln Ile Gln
145 150 155 160

Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr Val Lys
165 170 175

Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Gly Met Asn
 180 185 190
 Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met Gly Trp Ile
 195 200 205
 Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala Glu Glu Phe Lys Gly Arg
 210 215 220
 Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu Gln Ile
 225 230 235 240
 Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Leu
 245 250 255
 Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350
 Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
 355 360 365
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
 370 375 380
 Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
 385 390 395 400
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 405 410 415
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 420 425 430
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 435 440 445

Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
450 455 460

Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
465 470 475 480

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
485 490 495

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
500 505 510

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 83
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<213> artificial

<220>
<223> artificial Antibody

<400> 83

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1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys
115 120 125

Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly 145 Gly Ser Gly Gly Gly 150 Gly Ser Gly Gly Gly 155 Gly Ser Gln Ile Gln 160
 Leu Val Gln Ser Gly 165 Pro Glu Leu Lys Lys 170 Pro Gly Glu Thr Val 175 Lys
 Ile Ser Cys Lys 180 Ala Ser Gly Tyr Thr 185 Phe Thr Asn Tyr Gly 190 Met Asn
 Trp Val Lys 195 Gln Ala Pro Gly Lys 200 Cys Leu Lys Trp Met 205 Gly Trp Ile
 Asn Thr 210 Asn Thr Gly Glu Pro 215 Thr Tyr Ala Glu Glu 220 Phe Lys Gly Arg
 Phe 225 Ala Phe Ser Leu Glu 230 Thr Ser Ala Ser Thr 235 Ala Tyr Leu Gln Ile 240
 Asn Asn Leu Lys Asn 245 Glu Asp Thr Ala Thr 250 Tyr Phe Cys Ala Arg 255 Leu
 Gly Phe Gly Asn 260 Ala Met Asp Tyr Trp 265 Gly Gln Gly Thr Ser 270 Val Thr
 Val Ser Ser 275 Ser Gly Gly Gly Gly 280 Ser Gln Val Gln Leu 285 Gln Gln Ser
 Gly Ala 290 Glu Leu Ala Arg Pro 295 Gly Ala Ser Val Lys 300 Met Ser Cys Lys
 Thr 305 Ser Gly Tyr Thr Phe 310 Thr Arg Tyr Thr Met 315 His Trp Val Lys Gln 320
 Arg Pro Gly Gln Gly 325 Leu Glu Trp Ile Gly 330 Tyr Ile Asn Pro Ser 335 Arg
 Gly Tyr Thr Asn 340 Tyr Asn Gln Lys Phe 345 Lys Asp Lys Ala Thr 350 Leu Thr
 Thr Asp Lys 355 Ser Ser Ser Thr Ala 360 Tyr Met Gln Leu Ser 365 Ser Leu Thr
 Ser Glu 370 Asp Ser Ala Val Tyr 375 Tyr Cys Ala Arg Tyr 380 Tyr Asp Asp His
 Tyr 385 Ser Leu Asp Tyr Trp 390 Gly Gln Gly Thr Thr 395 Leu Thr Val Ser Ser 400
 Gly Gly Gly Gly Ser 405 Gly Gly Gly Gly Ser 410 Gly Gly Gly Gly Ser 415 Gly

Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
420 425 430

Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
435 440 445

Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
450 455 460

Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
465 470 475 480

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
485 490 495

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
500 505 510

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 84
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 84

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1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys
 115 120 125
 Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln
 145 150 155 160
 Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
 165 170 175
 Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
 180 185 190
 Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Asn Ile
 195 200 205
 Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 210 215 220
 Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 225 230 235 240
 Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
 245 250 255
 Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350
 Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
 355 360 365
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
 370 375 380

Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
385 390 395 400

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
405 410 415

Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
420 425 430

Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
435 440 445

Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
450 455 460

Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
465 470 475 480

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
485 490 495

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
500 505 510

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 85
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 85

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
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Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95
 Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110
 Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys
 115 120 125
 Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln
 145 150 155 160
 Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
 165 170 175
 Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
 180 185 190
 Trp Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Asn Ile
 195 200 205
 Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 210 215 220
 Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 225 230 235 240
 Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
 245 250 255
 Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350

Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
355 360 365

Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
370 375 380

Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
385 390 395 400

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
405 410 415

Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
420 425 430

Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
435 440 445

Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
450 455 460

Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
465 470 475 480

Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
485 490 495

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
500 505 510

Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly
515 520 525

Ser His His His His His His
530 535

<210> 86
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 86

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
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Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60
 Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80
 Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95
 Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110
 Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys
 115 120 125
 Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln
 145 150 155 160
 Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr Val Lys
 165 170 175
 Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Gly Met Asn
 180 185 190
 Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met Gly Trp Ile
 195 200 205
 Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala Glu Glu Phe Lys Gly Arg
 210 215 220
 Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu Gln Ile
 225 230 235 240
 Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Leu
 245 250 255
 Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320

Arg Pro Gly Gln Cys₃₂₅ Leu Glu Trp Ile Gly₃₃₀ Tyr Ile Asn Pro Ser₃₃₅ Arg

Gly Tyr Thr Asn₃₄₀ Tyr Asn Gln Lys Phe₃₄₅ Lys Asp Lys Ala Thr₃₅₀ Leu Thr

Thr Asp Lys₃₅₅ Ser Ser Ser Thr Ala₃₆₀ Tyr Met Gln Leu Ser₃₆₅ Ser Leu Thr

Ser Glu Asp Ser Ala Val Tyr₃₇₅ Tyr Cys Ala Arg Tyr₃₈₀ Tyr Asp Asp His

Tyr₃₈₅ Ser Leu Asp Tyr Trp₃₉₀ Gly Gln Gly Thr Thr₃₉₅ Leu Thr Val Ser₄₀₀ Ser

Gly Gly Gly Gly Ser₄₀₅ Gly Gly Gly Gly Ser₄₁₀ Gly Gly Gly Gly Ser₄₁₅ Gly

Gly Gly Gly Ser₄₂₀ Gln Ile Val Leu Thr₄₂₅ Gln Ser Pro Ala Ile₄₃₀ Met Ser

Ala Ser Pro₄₃₅ Gly Glu Lys Val Thr₄₄₀ Met Thr Cys Arg Ala₄₄₅ Ser Ser Ser

Val Ser₄₅₀ Tyr Met Asn Trp Tyr₄₅₅ Gln Gln Lys Ser Gly₄₆₀ Thr Ser Pro Lys

Arg Trp Ile Tyr Asp Thr₄₇₀ Ser Lys Val Ala Ser₄₇₅ Gly Val Pro Tyr Arg₄₈₀

Phe Ser Gly Ser₄₈₅ Ser Gly Thr Ser Tyr₄₉₀ Ser Leu Thr Ile Ser₄₉₅ Ser

Met Glu Ala Glu₅₀₀ Asp Ala Ala Thr Tyr₅₀₅ Tyr Cys Gln Gln Trp₅₁₀ Ser Ser

Asn Pro Leu₅₁₅ Thr Phe Gly Cys Gly₅₂₀ Thr Lys Leu Glu Leu₅₂₅ Lys Gly Gly

Ser His₅₃₀ His His His His₅₃₅

<210> 87
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 87

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
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 Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45
 Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60
 Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80
 Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95
 Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110
 Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys
 115 120 125
 Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln
 145 150 155 160
 Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr Val Lys
 165 170 175
 Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Gly Met Asn
 180 185 190
 Trp Val Lys Gln Ala Pro Gly Lys Cys Leu Lys Trp Met Gly Trp Ile
 195 200 205
 Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala Glu Glu Phe Lys Gly Arg
 210 215 220
 Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu Gln Ile
 225 230 235 240
 Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Leu
 245 250 255
 Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285

Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350
 Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
 355 360 365
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
 370 375 380
 Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
 385 390 395 400
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 405 410 415
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 420 425 430
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 435 440 445
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 450 455 460
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 465 470 475 480
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 485 490 495
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 500 505 510
 Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly
 515 520 525
 Ser His His His His His His
 530 535

<210> 88
 <211> 535
 <212> PRT
 <213> artificial

<220>

<223> artificial Antibody

<400> 88

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys
115 120 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gln Val Gln
145 150 155 160

Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
165 170 175

Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
180 185 190

Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Asn Ile
195 200 205

Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
210 215 220

Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
225 230 235 240

Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
245 250 255

Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350
 Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
 355 360 365
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
 370 375 380
 Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
 385 390 395 400
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 405 410 415
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 420 425 430
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 435 440 445
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 450 455 460
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 465 470 475 480
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 485 490 495
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 500 505 510
 Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly
 515 520 525
 Ser His His His His His His

530

535

<210> 89
 <211> 535
 <212> PRT
 <213> artificial

<220>
 <223> artificial Antibody

<400> 89

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
 20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys
 115 120 125

Leu Glu Ile Lys Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly
 130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gln Val Gln
 145 150 155 160

Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
 165 170 175

Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
 180 185 190

Trp Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Asn Ile
 195 200 205

Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 210 215 220

Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 225 230 235 240
 Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
 245 250 255
 Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser
 275 280 285
 Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys
 290 295 300
 Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln
 305 310 315 320
 Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg
 325 330 335
 Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
 340 345 350
 Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr
 355 360 365
 Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His
 370 375 380
 Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
 385 390 395 400
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 405 410 415
 Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser
 420 425 430
 Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser
 435 440 445
 Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys
 450 455 460
 Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly Val Pro Tyr Arg
 465 470 475 480
 Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
 485 490 495
 Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser
 Page 105

500

505

510

Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu Glu Leu Lys Gly Gly
 515 520 525

Ser His His His His His His
 530 535

<210> 90
 <211> 540
 <212> PRT
 <213> artificial

<220>
 <223> artificial Antibody

<400> 90

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
 20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys
 115 120 125

Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gln Ile Gln
 145 150 155 160

Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu Thr Val Lys
 165 170 175

Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Gly Met Asn
 180 185 190

Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met Gly Trp Ile
 195 200 205
 Asn Thr Asn Thr Gly Glu Pro Thr Tyr Ala Glu Glu Phe Lys Gly Arg
 210 215 220
 Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr Leu Gln Ile
 225 230 235 240
 Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Leu
 245 250 255
 Gly Phe Gly Asn Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser
 275 280 285
 Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys
 290 295 300
 Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser
 305 310 315 320
 Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
 325 330 335
 Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
 340 345 350
 Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
 355 360 365
 Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu
 370 375 380
 Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 385 390 395 400
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
 405 410 415
 Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met
 420 425 430
 Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp
 435 440 445
 Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn
 450 455 460
 Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala

465 470 475 480
 Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
 485 490 495
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr
 500 505 510
 Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 515 520 525
 Val Ser Ser Gly Gly Ser His His His His His His
 530 535 540

 <210> 91
 <211> 540
 <212> PRT
 <213> artificial

 <220>
 <223> artificial Antibody

 <400> 91
 Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15
 Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
 20 25 30
 Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45
 Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60
 Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80
 Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95
 Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110
 Cys Gln Asn Asp Tyr Ser Tyr Pro Leu Thr Phe Gly Cys Gly Thr Lys
 115 120 125
 Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Ile Gln
 145 150 155 160

Leu Val Gln Ser Gly₁₆₅ Pro Glu Leu Lys Lys₁₇₀ Pro Gly Glu Thr Val₁₇₅ Lys
 Ile Ser Cys Lys₁₈₀ Ala Ser Gly Tyr Thr₁₈₅ Phe Thr Asn Tyr Gly₁₉₀ Met Asn
 Trp Val Lys₁₉₅ Gln Ala Pro Gly Lys₂₀₀ Cys Leu Lys Trp Met₂₀₅ Gly Trp Ile
 Asn Thr₂₁₀ Asn Thr Gly Glu Pro₂₁₅ Thr Tyr Ala Glu Glu₂₂₀ Phe Lys Gly Arg
 Phe Ala Phe Ser Leu Glu₂₃₀ Thr Ser Ala Ser Thr₂₃₅ Ala Tyr Leu Gln Ile₂₄₀
 Asn Asn Leu Lys Asn₂₄₅ Glu Asp Thr Ala Thr₂₅₀ Tyr Phe Cys Ala Arg₂₅₅ Leu
 Gly Phe Gly Asn₂₆₀ Ala Met Asp Tyr Trp₂₆₅ Gly Gln Gly Thr Ser₂₇₀ Val Thr
 Val Ser Ser₂₇₅ Ser Gly Gly Gly Gly₂₈₀ Ser Gln Ile Val Leu₂₈₅ Thr Gln Ser
 Pro Ala₂₉₀ Ile Met Ser Ala Ser₂₉₅ Pro Gly Glu Lys Val₃₀₀ Thr Met Thr Cys
 Arg Ala Ser Ser Ser Val₃₁₀ Ser Tyr Met Asn Trp₃₁₅ Tyr Gln Gln Lys Ser₃₂₀
 Gly Thr Ser Pro Lys₃₂₅ Arg Trp Ile Tyr Asp₃₃₀ Thr Ser Lys Val Ala₃₃₅ Ser
 Gly Val Pro Tyr₃₄₀ Arg Phe Ser Gly Ser₃₄₅ Gly Ser Gly Thr Ser₃₅₀ Tyr Ser
 Leu Thr Ile₃₅₅ Ser Ser Met Glu Ala₃₆₀ Glu Asp Ala Ala Thr₃₆₅ Tyr Tyr Cys
 Gln Gln Trp Ser Ser Asn Pro₃₇₅ Leu Thr Phe Gly Cys₃₈₀ Gly Thr Lys Leu
 Glu Leu Lys Gly Gly Gly₃₉₀ Gly Ser Gly Gly Gly₃₉₅ Gly Ser Gly Gly Gly₄₀₀
 Gly Ser Gly Gly Gly₄₀₅ Gly Ser Gly Gly Gly₄₁₀ Gly Ser Gln Val Gln₄₁₅ Leu
 Gln Gln Ser Gly₄₂₀ Ala Glu Leu Ala Arg₄₂₅ Pro Gly Ala Ser Val₄₃₀ Lys Met
 Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp

435

440

445

Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn
 450 455 460

Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala
 465 470 475 480

Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
 485 490 495

Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr
 500 505 510

Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 515 520 525

Val Ser Ser Gly Gly Ser His His His His His His
 530 535 540

<210> 92
 <211> 540
 <212> PRT
 <213> artificial

<220>
 <223> artificial Antibody

<400> 92

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15

Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
 20 25 30

Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45

Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110

Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys
 115 120 125

Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln
 145 150 155 160
 Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
 165 170 175
 Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
 180 185 190
 Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Asn Ile
 195 200 205
 Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 210 215 220
 Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 225 230 235 240
 Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
 245 250 255
 Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser
 275 280 285
 Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys
 290 295 300
 Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser
 305 310 315 320
 Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
 325 330 335
 Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
 340 345 350
 Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
 355 360 365
 Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu
 370 375 380
 Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 385 390 395 400
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu

405 410 415
 Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met
 420 425 430
 Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp
 435 440 445
 Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn
 450 455 460
 Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala
 465 470 475 480
 Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
 485 490 495
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr
 500 505 510
 Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 515 520 525
 Val Ser Ser Gly Gly Ser His His His His His His
 530 535 540
 <210> 93
 <211> 540
 <212> PRT
 <213> artificial
 <220>
 <223> artificial Antibody
 <400> 93
 Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
 1 5 10 15
 Val His Ser Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val
 20 25 30
 Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45
 Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys
 50 55 60
 Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu
 65 70 75 80
 Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe
 85 90 95

Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr
 100 105 110
 Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe Gly Cys Gly Thr Lys
 115 120 125
 Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln
 145 150 155 160
 Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Lys
 165 170 175
 Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr Trp Ile Asn
 180 185 190
 Trp Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Asn Ile
 195 200 205
 Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
 210 215 220
 Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
 225 230 235 240
 Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Arg Ser
 245 250 255
 Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
 260 265 270
 Val Ser Ser Ser Gly Gly Gly Gly Ser Gln Ile Val Leu Thr Gln Ser
 275 280 285
 Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys
 290 295 300
 Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser
 305 310 315 320
 Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser
 325 330 335
 Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser
 340 345 350
 Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys
 355 360 365
 Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Cys Gly Thr Lys Leu

370

375

380

Glu Leu Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
405 410 415

Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met
420 425 430

Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp
435 440 445

Val Lys Gln Arg Pro Gly Gln Cys Leu Glu Trp Ile Gly Tyr Ile Asn
450 455 460

Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala
465 470 475 480

Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
485 490 495

Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr
500 505 510

Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr
515 520 525

Val Ser Ser Gly Gly Ser His His His His His His
530 535 540

<210> 94
<211> 119
<212> PRT
<213> Mus musculus

<400> 94

Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala
1 5 10 15

Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr
20 25 30

Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser
115

<210> 95
<211> 116
<212> PRT
<213> Mus musculus

<400> 95

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

Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His
20 25 30

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

Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys
50 55 60

Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu
65 70 75 80

Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr
85 90 95

Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 96
<211> 103
<212> PRT
<213> Mus musculus

<400> 96

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

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

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

Lys Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly
50 55 60

Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala
65 70 75 80

Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala
85 90 95

Gly Thr Lys Leu Glu Leu Lys
100

<210> 97
<211> 107
<212> PRT
<213> Mus musculus

<400> 97

Asp Ile Val Leu Thr Gln Ser Pro Ser Ile Met Ser Val Ser Pro Gly
1 5 10 15

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

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

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 98
<211> 106
<212> PRT
<213> Mus musculus

<400> 98

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Leu Ile Tyr Ser

35

40

45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 99

<211> 106

<212> PRT

<213> Mus musculus

<400> 99

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 100

<211> 106

<212> PRT

<213> Mus musculus

<400> 100

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

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met His
20 25 30

Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Ser Ile Tyr Ser
35 40 45

Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg Gly
50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu Asp
65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp Thr
85 90 95

Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 101
<211> 513
<212> PRT
<213> artificial

<220>
<223> bispecific molecule 107

<400> 101

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly
130 135 140

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu
145 150 155 160

Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr
 165 170 175
 Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln
 180 185 190
 Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys
 195 200 205
 Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr
 210 215 220
 Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr
 225 230 235 240
 Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly
 245 250 255
 Thr Lys Leu Glu Leu Lys Ser Gly Gly Gly Ser Glu Val Gln Leu
 260 265 270
 Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met Lys Ile
 275 280 285
 Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp
 290 295 300
 Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile Gly Leu Ile Asn
 305 310 315 320
 Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe Lys Gly Lys Ala
 325 330 335
 Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu
 340 345 350
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Asp Tyr
 355 360 365
 Gly Phe Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
 370 375 380
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 385 390 395 400
 Asp Ile Val Leu Thr Gln Ser Pro Ser Ile Met Ser Val Ser Pro Gly
 405 410 415
 Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
 420 425 430

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Cys Ile Tyr
435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys His His His His His
500 505 510

His

<210> 102
<211> 513
<212> PRT
<213> artificial

<220>
<223> bispecific molecule 123

<400> 102

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
20 25 30

Pro Gly Ala Ser Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe
35 40 45

Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp
115 120 125

Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly
130 135 140

Gly Ser Gly Gly Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu
 145 150 155 160
 Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr
 165 170 175
 Met Thr Cys Arg Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln
 180 185 190
 Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys
 195 200 205
 Val Ala Ser Gly Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr
 210 215 220
 Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr
 225 230 235 240
 Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly
 245 250 255
 Thr Lys Leu Glu Leu Lys Ser Gly Gly Gly Gly Ser Glu Val Gln Leu
 260 265 270
 Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Met Lys Ile
 275 280 285
 Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Gly Tyr Thr Met Asn Trp
 290 295 300
 Val Lys Gln Ser His Gly Lys Asn Leu Glu Trp Ile Gly Leu Ile Asn
 305 310 315 320
 Pro Tyr Asn Gly Gly Thr Ile Tyr Asn Gln Lys Phe Lys Gly Lys Ala
 325 330 335
 Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Met Glu Leu Leu
 340 345 350
 Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Asp Tyr
 355 360 365
 Gly Phe Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
 370 375 380
 Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 385 390 395 400
 Asp Ile Val Leu Thr Gln Ser Pro Ser Ile Met Ser Val Ser Pro Gly
 405 410 415

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
420 425 430

His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Leu Ile Tyr
435 440 445

Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Arg
450 455 460

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Val Ala Ala Glu
465 470 475 480

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Asn Tyr Pro Pro Trp
485 490 495

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys His His His His His
500 505 510

His

<210> 103
<211> 520
<212> PRT
<213> artificial

<220>
<223> bispecific molecule 124

<400> 103

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Ser Tyr Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val
100 105 110

Tyr Tyr Cys Thr Arg Ser Trp Arg Gly Asn Ser Phe Asp Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Leu Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140
 Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro
 145 150 155 160
 Ser Ser Leu Thr Val Thr Ala Gly Glu Lys Val Thr Met Ser Cys Lys
 165 170 175
 Ser Ser Gln Ser Leu Leu Asn Ser Gly Asn Gln Lys Asn Tyr Leu Thr
 180 185 190
 Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp
 195 200 205
 Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly
 210 215 220
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp
 225 230 235 240
 Leu Ala Val Tyr Tyr Cys Gln Asn Asp Tyr Ser Tyr Pro Phe Thr Phe
 245 250 255
 Gly Ser Gly Thr Lys Leu Glu Ile Lys Ser Gly Gly Gly Gly Ser Asp
 260 265 270
 Ile Lys Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser
 275 280 285
 Val Lys Met Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Arg Tyr Thr
 290 295 300
 Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly
 305 310 315 320
 Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys
 325 330 335
 Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met
 340 345 350
 Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala
 355 360 365
 Arg Tyr Tyr Asp Asp His Tyr Ser Leu Asp Tyr Trp Gly Gln Gly Thr
 370 375 380
 Thr Leu Thr Val Ser Ser Val Glu Gly Gly Ser Gly Gly Ser Gly Gly
 385 390 395 400

Ser Gly Gly Ser Gly Gly Val Asp Asp Ile Gln Leu Thr Gln Ser Pro
405 410 415

Ala Ile Met Ser Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Arg
420 425 430

Ala Ser Ser Ser Val Ser Tyr Met Asn Trp Tyr Gln Gln Lys Ser Gly
435 440 445

Thr Ser Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Val Ala Ser Gly
450 455 460

Val Pro Tyr Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu
465 470 475 480

Thr Ile Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln
485 490 495

Gln Trp Ser Ser Asn Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu
500 505 510

Leu Lys His His His His His His
515 520

<210> 104
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker

<400> 104

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser
20

<210> 105
<211> 25
<212> PRT
<213> Artificial Sequence

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