SEQUENCE LISTING

<110> BioNTech AG et al.

<120> AGENTS FOR TREATMENT OF CLAUDIN EXPRESSING CANCER DISEASES

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<160> 108

<170> PatentIn version 3.5

<210> 1
<211> 261
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<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
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<210> 4
<211> 207
<212> PRT
<213> Homo sapiens

<400> 4

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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
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<210> 5
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<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

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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

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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
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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

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

<220>
<223> Antibody fragment

<400> 26

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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
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<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 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 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 Trp 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> 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 Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gln Ile Val 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

Gln 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
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 Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gln Ile Val 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

Gln 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 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 Ser Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gln Ile Val 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

Gln 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 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
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 Ala Gly Thr Lys Leu Glu Leu 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 Gly
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 Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly Ser His His His His
        515                 520                 525

His His
    530
```

<210> 67
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 67

```
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 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 Gly
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 Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly Ser His His His His
515 520 525

His His
530

<210> 68
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 68

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

His His
530

<210> 69
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 69

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

His His
530

<210> 70
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 70

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 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 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> 71
<211> 530
<212> PRT

<213> artificial

<220>
<223> artificial Antibody

<400> 71

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 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> 72
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 72

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 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> 73
<211> 530
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 73

```
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 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 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 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 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 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 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> 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 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 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> 82
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 82

```
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 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
<211> 535
<212> PRT
<213> artificial

<220>
<223> artificial Antibody

<400> 83

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

<220>
<223> artificial Antibody

<400> 84

```
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 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
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 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
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 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 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> 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
            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 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 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 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 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> 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 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 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 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> 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 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
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<211> 520
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<220>
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<400> 103

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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
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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
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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

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Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
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Gly Gly Gly Ser
20

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Gly Gly Gly Ser Gly Gly Gly Gly Ser
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Gly Ser

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<400> 107

His His His His His His
1 5

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Gly Gly Ser His His His His His His
1 5