SEQUENCE LISTING

<110> ULTRAHUMAN EIGHT LIMITED

<120> PD1 BINDING AGENTS

<130> UHEL-001/01WO 332951-2006

<150> GB 1817652.9
<151> 2018-10-29

<150> GB 1816372.5
<151> 2018-10-08

<150> GB 1811302.7
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<150> GB 1807176.1
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<150> GB 1803745.7
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<160> 182

<170> PatentIn version 3.5

<210> 1
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-08 heavy chain variable (VH) region

<400> 1

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Gly Gly Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr

65 70 75 80

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

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

Thr Val Ser Ser
115

<210> 2
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-08 light chain variable (VL) region

<400> 2

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 Ser Ile Ser Ser Trp
20 25 30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 3

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

<220>
<223> Antibody IgG1-05 heavy chain variable (VH) region

<400> 3

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Gly Gly Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60

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

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

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

Thr Val Ser Ser
115

<210> 4
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-05 light chain variable (VL) region

<400> 4

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 Ser Ile Ser Ser Trp
            20                  25                  30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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

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

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

<210> 5
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-11 heavy chain variable (VH) region

<400> 5

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Thr Ile Ser Gly Gly Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
    50                  55                  60

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

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

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

Thr Val Ser Ser
115

<210> 6
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-11 light chain variable (VL) region

<400> 6

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 Ser Ile Ser Ser Trp
20 25 30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 7
<211> 116
<212> PRT

<213> Artificial Sequence

<220>
<223> Antibody IgG1-14 heavy chain variable (VH) region

<400> 7

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Gly Gly Gly Ser Glu Lys Tyr Tyr Val Asp Ser Val
50 55 60

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

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

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

Thr Val Ser Ser
115

<210> 8
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody IgG1-14 light chain variable (VL) region

<400> 8

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 Ser Ile Ser Ser Trp

```
            20                  25                  30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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

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

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

<210> 9
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody 06D02 heavy chain variable (VH) region

<400> 9

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ala Thr Ile Ser Gly Gly Gly Ser Glu Thr Tyr Tyr Val Asp Ser Val
    50                  55                  60

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

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
```

85 90 95

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

Thr Val Ser Ser
115

<210> 10
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody 06D02 light chain variable (VL) region

<400> 10

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 Ser Ile Ser Ser Trp
20 25 30

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

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Trp
85 90 95

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

<210> 11
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody 12H04 heavy chain variable (VH) region

<400> 11

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

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

Leu Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

Ala Thr Ile Ser Gly Gly Gly Ala Glu Lys Tyr Tyr Val Asp Ser Val
    50   55   60

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

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

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

Thr Val Ser Ser
        115

<210> 12
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody 12H04 light chain variable (VL) region

<400> 12

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 Ser Ile Ser Ser Trp
            20   25   30

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

Tyr Ala Ala Ser Ser Leu Gln Asp Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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

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

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

<210> 13
<211> 327
<212> PRT
<213> Homo sapiens

<400> 13

```
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1               5                   10                  15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65                  70                  75                  80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
            100                 105                 110
```

```
Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
        115                 120                 125

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
    130                 135                 140

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

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320
```

Leu Ser Leu Ser Leu Gly Lys
325

<210> 14
<211> 327
<212> PRT
<213> Homo sapiens

<400> 14

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
100 105 110

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
115 120 125

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
130 135 140

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

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
165 170 175

```
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320

Leu Ser Leu Ser Leu Gly Lys
                325
```

<210> 15
<211> 330
<212> PRT
<213> Homo sapiens

<400> 15

```
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1               5                   10                  15

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

```
Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65                  70                  75                  80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225                 230                 235                 240
```

```
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255


Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270


Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285


Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300


Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305                 310                 315                 320


Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325                 330


<210>  16
<211>  330
<212>  PRT
<213>  Homo sapiens

<400>  16

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1               5                   10                  15


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


Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45


Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60


Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65                  70                  75                  80


Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95
```

```
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Ala Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225                 230                 235                 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
```

305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 17
<211> 326
<212> PRT
<213> Homo sapiens

<400> 17

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro
100 105 110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
115 120 125

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
130 135 140

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

```
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn
                165                 170                 175

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

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro
        195                 200                 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu
    210                 215                 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
225                 230                 235                 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
                245                 250                 255

Ser Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
            260                 265                 270

Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
        275                 280                 285

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
    290                 295                 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
305                 310                 315                 320

Ser Leu Ser Pro Gly Lys
                325
```

<210> 18
<211> 330
<212> PRT
<213> Homo sapiens

<400> 18

```
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1               5                   10                  15
```

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
    50                  55                  60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65                  70                  75                  80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
```

225 230 235 240

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
245 250 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
260 265 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
325 330

<210> 19
<211> 329
<212> PRT
<213> Homo sapiens

<400> 19

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

```
Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Ala Ala Gly Ala Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
225                 230                 235                 240

Met Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
                245                 250                 255

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
            260                 265                 270

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
        275                 280                 285

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
    290                 295                 300
```

```
Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
305                 310                 315                 320


Lys Ser Leu Ser Leu Ser Pro Gly Lys
                325
```

<210> 20
<211> 288
<212> PRT
<213> Homo sapiens

<400> 20

```
Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln
1               5                   10                  15


Leu Gly Trp Arg Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp
            20                  25                  30


Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu Gly Asp
        35                  40                  45


Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val
    50                  55                  60


Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala
65                  70                  75                  80


Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg
                85                  90                  95


Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg
            100                 105                 110


Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu
        115                 120                 125


Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val
    130                 135                 140


Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro
```

145 150 155 160

Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Val Gly Val Val Gly Gly
165 170 175

Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys
180 185 190

Ser Arg Ala Ala Arg Gly Thr Ile Gly Ala Arg Arg Thr Gly Gln Pro
195 200 205

Leu Lys Glu Asp Pro Ser Ala Val Pro Val Phe Ser Val Asp Tyr Gly
210 215 220

Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Val Pro
225 230 235 240

Cys Val Pro Glu Gln Thr Glu Tyr Ala Thr Ile Val Phe Pro Ser Gly
245 250 255

Met Gly Thr Ser Ser Pro Ala Arg Arg Gly Ser Ala Asp Gly Pro Arg
260 265 270

Ser Ala Gln Pro Leu Arg Pro Glu Asp Gly His Cys Ser Trp Pro Leu
275 280 285

<210> 21
<211> 288
<212> PRT
<213> Macaca fascicularis

<400> 21

Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln
1 5 10 15

Leu Gly Trp Arg Pro Gly Trp Phe Leu Glu Ser Pro Asp Arg Pro Trp
20 25 30

Asn Ala Pro Thr Phe Ser Pro Ala Leu Leu Leu Val Thr Glu Gly Asp
35 40 45

```
Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Ala Ser Glu Ser Phe Val
    50                  55                  60

Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala
65                  70                  75                  80

Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg
                85                  90                  95

Val Thr Arg Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg
            100                 105                 110

Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu
        115                 120                 125

Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val
    130                 135                 140

Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro
145                 150                 155                 160

Arg Pro Ala Gly Gln Phe Gln Ala Leu Val Val Gly Val Val Gly Gly
                165                 170                 175

Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys
            180                 185                 190

Ser Arg Ala Ala Gln Gly Thr Ile Glu Ala Arg Arg Thr Gly Gln Pro
        195                 200                 205

Leu Lys Glu Asp Pro Ser Ala Val Pro Val Phe Ser Val Asp Tyr Gly
    210                 215                 220

Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Ala Pro
225                 230                 235                 240

Cys Val Pro Glu Gln Thr Glu Tyr Ala Thr Ile Val Phe Pro Ser Gly
                245                 250                 255

Leu Gly Thr Ser Ser Pro Ala Arg Arg Gly Ser Ala Asp Gly Pro Arg
            260                 265                 270
```

```
Ser Pro Arg Pro Leu Arg Pro Glu Asp Gly His Cys Ser Trp Pro Leu
        275                 280                 285


<210>  22
<211>  1356
<212>  PRT
<213>  Homo sapiens

<400>  22

Met Gln Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu
1               5                   10                  15


Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro
            20                  25                  30


Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr
        35                  40                  45


Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
    50                  55                  60


Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser
65                  70                  75                  80


Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn
                85                  90                  95


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


Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser
        115                 120                 125


Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys
    130                 135                 140


Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser
145                 150                 155                 160


Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
```

```
                165                 170                 175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
            180                 185                 190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser
        195                 200                 205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr
    210                 215                 220

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
225                 230                 235                 240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
                245                 250                 255

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
            260                 265                 270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
        275                 280                 285

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
    290                 295                 300

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
305                 310                 315                 320

Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met
                325                 330                 335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala
            340                 345                 350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly
        355                 360                 365

Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr
    370                 375                 380
```

```
Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu
385                 390                 395                 400

Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
                405                 410                 415

Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val
            420                 425                 430

Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr
        435                 440                 445

Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu
    450                 455                 460

Glu Cys Ala Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr
465                 470                 475                 480

Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys
                485                 490                 495

Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys
            500                 505                 510

Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr
        515                 520                 525

Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser
    530                 535                 540

Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln
545                 550                 555                 560

Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser
                565                 570                 575

Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro
            580                 585                 590

Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr
```

```
        595                 600                 605

Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile
    610                 615                 620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr
625                 630                 635                 640

Val Cys Leu Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val
                645                 650                 655

Arg Gln Leu Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn
            660                 665                 670

Leu Glu Asn Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys
        675                 680                 685

Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn
    690                 695                 700

Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg
705                 710                 715                 720

Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr
                725                 730                 735

Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe
            740                 745                 750

Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Ile Ile Ile Leu
        755                 760                 765

Val Gly Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile
    770                 775                 780

Ile Leu Arg Thr Val Lys Arg Ala Asn Gly Gly Glu Leu Lys Thr Gly
785                 790                 795                 800

Tyr Leu Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His
                805                 810                 815
```

```
Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp
            820                 825                 830

Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val
        835                 840                 845

Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr
    850                 855                 860

Val Ala Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg
865                 870                 875                 880

Ala Leu Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu
                885                 890                 895

Asn Val Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu
            900                 905                 910

Met Val Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu
        915                 920                 925

Arg Ser Lys Arg Asn Glu Phe Val Pro Tyr Lys Thr Lys Gly Ala Arg
    930                 935                 940

Phe Arg Gln Gly Lys Asp Tyr Val Gly Ala Ile Pro Val Asp Leu Lys
945                 950                 955                 960

Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly
                965                 970                 975

Phe Val Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Pro
            980                 985                 990

Glu Asp Leu Tyr Lys Asp Phe Leu  Thr Leu Glu His Leu  Ile Cys Tyr
        995                 1000                1005

Ser Phe  Gln Val Ala Lys Gly  Met Glu Phe Leu Ala  Ser Arg Lys
    1010                1015                1020

Cys Ile  His Arg Asp Leu Ala  Ala Arg Asn Ile Leu  Leu Ser Glu
```

```
    1025                1030                1035

Lys Asn  Val Val Lys Ile Cys  Asp Phe Gly Leu Ala  Arg Asp Ile
    1040                1045                1050

Tyr Lys  Asp Pro Asp Tyr Val  Arg Lys Gly Asp Ala  Arg Leu Pro
    1055                1060                1065

Leu Lys  Trp Met Ala Pro Glu  Thr Ile Phe Asp Arg  Val Tyr Thr
    1070                1075                1080

Ile Gln  Ser Asp Val Trp Ser  Phe Gly Val Leu Leu  Trp Glu Ile
    1085                1090                1095

Phe Ser  Leu Gly Ala Ser Pro  Tyr Pro Gly Val Lys  Ile Asp Glu
    1100                1105                1110

Glu Phe  Cys Arg Arg Leu Lys  Glu Gly Thr Arg Met  Arg Ala Pro
    1115                1120                1125

Asp Tyr  Thr Thr Pro Glu Met  Tyr Gln Thr Met Leu  Asp Cys Trp
    1130                1135                1140

His Gly  Glu Pro Ser Gln Arg  Pro Thr Phe Ser Glu  Leu Val Glu
    1145                1150                1155

His Leu  Gly Asn Leu Leu Gln  Ala Asn Ala Gln Gln  Asp Gly Lys
    1160                1165                1170

Asp Tyr  Ile Val Leu Pro Ile  Ser Glu Thr Leu Ser  Met Glu Glu
    1175                1180                1185

Asp Ser  Gly Leu Ser Leu Pro  Thr Ser Pro Val Ser  Cys Met Glu
    1190                1195                1200

Glu Glu  Glu Val Cys Asp Pro  Lys Phe His Tyr Asp  Asn Thr Ala
    1205                1210                1215

Gly Ile  Ser Gln Tyr Leu Gln  Asn Ser Lys Arg Lys  Ser Arg Pro
    1220                1225                1230
```

```
Val Ser  Val Lys Thr Phe Glu  Asp Ile Pro Leu Glu  Glu Pro Glu
    1235                1240                1245


Val Lys  Val Ile Pro Asp Asp  Asn Gln Thr Asp Ser  Gly Met Val
    1250                1255                1260


Leu Ala  Ser Glu Glu Leu Lys  Thr Leu Glu Asp Arg  Thr Lys Leu
    1265                1270                1275


Ser Pro  Ser Phe Gly Gly Met  Val Pro Ser Lys Ser  Arg Glu Ser
    1280                1285                1290


Val Ala  Ser Glu Gly Ser Asn  Gln Thr Ser Gly Tyr  Gln Ser Gly
    1295                1300                1305


Tyr His  Ser Asp Asp Thr Asp  Thr Thr Val Tyr Ser  Ser Glu Glu
    1310                1315                1320


Ala Glu  Leu Leu Lys Leu Ile  Glu Ile Gly Val Gln  Thr Gly Ser
    1325                1330                1335


Thr Ala  Gln Ile Leu Gln Pro  Asp Ser Gly Thr Thr  Leu Ser Ser
    1340                1345                1350


Pro Pro  Val
    1355


<210>  23
<211>  1356
<212>  PRT
<213>  Macaca mulatta

<400>  23

Met Ala Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu
1               5                   10                  15


Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro
            20                  25                  30


Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr
        35                  40                  45
```

```
Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
    50                  55                  60

Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser
65                  70                  75                  80

Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn
                85                  90                  95

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

Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser
        115                 120                 125

Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys
    130                 135                 140

Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser
145                 150                 155                 160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
                165                 170                 175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
            180                 185                 190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser
        195                 200                 205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr
    210                 215                 220

Asp Val Val Leu Ser Pro Ser His Gly Val Glu Leu Ser Val Gly Glu
225                 230                 235                 240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
                245                 250                 255
```

```
Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
            260                 265                 270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
        275                 280                 285

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
    290                 295                 300

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
305                 310                 315                 320

Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met
                325                 330                 335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Val
            340                 345                 350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly
        355                 360                 365

Ile Pro Leu Glu Ser Asn His Thr Val Lys Val Gly His Val Leu Thr
    370                 375                 380

Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu
385                 390                 395                 400

Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
                405                 410                 415

Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val
            420                 425                 430

Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr
        435                 440                 445

Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu
    450                 455                 460

Glu Cys Pro Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr
465                 470                 475                 480
```

```
Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys
               485                 490                 495

Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys
            500                 505                 510

Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr
        515                 520                 525

Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser
    530                 535                 540

Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Leu Gln
545                 550                 555                 560

Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Lys Ser
               565                 570                 575

Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro
            580                 585                 590

Val His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr
        595                 600                 605

Leu Trp Lys Leu Asn Ala Thr Ile Phe Ser Asn Ser Thr Asn Asp Ile
    610                 615                 620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr
625                 630                 635                 640

Val Cys Val Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val
               645                 650                 655

Arg Gln Leu Thr Val Leu Glu Arg Val Ala Pro Met Ile Thr Gly Asn
            660                 665                 670

Leu Glu Asn Gln Thr Thr Ser Ile Gly Glu Thr Ile Glu Val Ser Cys
        675                 680                 685
```

```
Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn
    690                 695                 700

Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg
705                 710                 715                 720

Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr
                725                 730                 735

Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe
            740                 745                 750

Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Ile Ile Ile Leu
        755                 760                 765

Val Gly Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile
    770                 775                 780

Ile Leu Arg Thr Val Lys Arg Ala Asn Gly Gly Glu Leu Lys Thr Gly
785                 790                 795                 800

Tyr Leu Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu His
                805                 810                 815

Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp
            820                 825                 830

Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val
        835                 840                 845

Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr
    850                 855                 860

Val Ala Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg
865                 870                 875                 880

Ala Leu Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu
                885                 890                 895

Asn Val Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu
            900                 905                 910
```

```
Met Val Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu
        915                 920                 925


Arg Ser Lys Arg Asn Glu Phe Val Pro Tyr Lys Thr Lys Gly Ala Arg
    930                 935                 940


Phe Arg Gln Gly Lys Asp Tyr Val Gly Ala Ile Pro Val Asp Leu Lys
945                 950                 955                 960


Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly
                965                 970                 975


Phe Val Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Pro
            980                 985                 990


Glu Asp Leu Tyr Lys Asp Phe Leu  Thr Leu Glu His Leu  Ile Cys Tyr
        995                 1000                1005


Ser Phe  Gln Val Ala Lys Gly  Met Glu Phe Leu Ala  Ser Arg Lys
    1010                1015                1020


Cys Ile  His Arg Asp Leu Ala  Ala Arg Asn Ile Leu  Leu Ser Glu
    1025                1030                1035


Lys Asn  Val Val Lys Ile Cys  Asp Phe Gly Leu Ala  Arg Asp Ile
    1040                1045                1050


Tyr Lys  Asp Pro Asp Tyr Val  Arg Lys Gly Asp Ala  Arg Leu Pro
    1055                1060                1065


Leu Lys  Trp Met Ala Pro Glu  Thr Ile Phe Asp Arg  Val Tyr Thr
    1070                1075                1080


Ile Gln  Ser Asp Val Trp Ser  Phe Gly Val Leu Leu  Trp Glu Ile
    1085                1090                1095


Phe Ser  Leu Gly Ala Ser Pro  Tyr Pro Gly Val Lys  Ile Asp Glu
    1100                1105                1110
```

```
Glu Phe  Cys Arg Arg Leu Lys  Glu Gly Thr Arg Met  Arg Ala Pro
    1115                1120                1125

Asp Tyr  Thr Thr Pro Glu Met  Tyr Gln Thr Met Leu  Asp Cys Trp
    1130                1135                1140

His Gly  Glu Pro Ser Gln Arg  Pro Thr Phe Ser Glu  Leu Val Glu
    1145                1150                1155

His Leu  Gly Asn Leu Leu Gln  Ala Asn Ala Gln Gln  Asp Gly Lys
    1160                1165                1170

Asp Tyr  Ile Val Leu Pro Ile  Ser Glu Thr Leu Ser  Met Glu Glu
    1175                1180                1185

Asp Ser  Gly Leu Ser Leu Pro  Thr Ser Pro Val Ser  Cys Met Glu
    1190                1195                1200

Glu Glu  Glu Val Cys Asp Pro  Lys Phe His Tyr Asp  Asn Thr Ala
    1205                1210                1215

Gly Ile  Ser Gln Tyr Leu Gln  Asn Ser Lys Arg Lys  Ser Arg Pro
    1220                1225                1230

Val Ser  Val Lys Thr Phe Glu  Asp Ile Pro Leu Glu  Glu Pro Glu
    1235                1240                1245

Val Lys  Val Ile Pro Asp Asp  Asn Gln Thr Asp Ser  Gly Met Val
    1250                1255                1260

Leu Ala  Ser Glu Glu Leu Lys  Thr Leu Glu Asp Arg  Thr Lys Leu
    1265                1270                1275

Ala Pro  Ser Phe Ser Gly Met  Val Ser Ser Lys Ser  Arg Glu Ser
    1280                1285                1290

Val Ala  Ser Glu Gly Ser Asn  Gln Thr Ser Gly Tyr  Gln Ser Gly
    1295                1300                1305

Tyr His  Ser Asp Asp Thr Asp  Thr Thr Val Tyr Ser  Ser Glu Glu
    1310                1315                1320
```

Ala Glu Leu Leu Lys Leu Ile Glu Ile Gly Val Gln Thr Gly Ser
    1325   1330   1335

Thr Ala Gln Ile Leu Gln Pro Asp Ser Gly Thr Thr Leu Ser Ser
    1340   1345   1350

Pro Pro Val
    1355

<210> 24
<211> 585
<212> PRT
<213> Homo sapiens

<400> 24

Met Ala Arg Pro Asp Pro Ser Ala Pro Pro Ser Leu Leu Leu Leu Leu
1   5   10   15

Leu Ala Gln Leu Val Gly Arg Ala Ala Ala Ala Ser Lys Ala Pro Val
            20   25   30

Cys Gln Glu Ile Thr Val Pro Met Cys Arg Gly Ile Gly Tyr Asn Leu
        35   40   45

Thr His Met Pro Asn Gln Phe Asn His Asp Thr Gln Asp Glu Ala Gly
    50   55   60

Leu Glu Val His Gln Phe Trp Pro Leu Val Glu Ile Gln Cys Ser Pro
65   70   75   80

Asp Leu Arg Phe Phe Leu Cys Ser Met Tyr Thr Pro Ile Cys Leu Pro
                85   90   95

Asp Tyr His Lys Pro Leu Pro Pro Cys Arg Ser Val Cys Glu Arg Ala
            100   105   110

Lys Ala Gly Cys Ser Pro Leu Met Arg Gln Tyr Gly Phe Ala Trp Pro
        115   120   125

Glu Arg Met Ser Cys Asp Arg Leu Pro Val Leu Gly Arg Asp Ala Glu

```
    130                 135                 140

Val Leu Cys Met Asp Tyr Asn Arg Ser Glu Ala Thr Thr Ala Pro Pro
145                 150                 155                 160

Arg Pro Phe Pro Ala Lys Pro Thr Leu Pro Gly Pro Pro Gly Ala Pro
                165                 170                 175

Ala Ser Gly Gly Glu Cys Pro Ala Gly Gly Pro Phe Val Cys Lys Cys
            180                 185                 190

Arg Glu Pro Phe Val Pro Ile Leu Lys Glu Ser His Pro Leu Tyr Asn
        195                 200                 205

Lys Val Arg Thr Gly Gln Val Pro Asn Cys Ala Val Pro Cys Tyr Gln
    210                 215                 220

Pro Ser Phe Ser Ala Asp Glu Arg Thr Phe Ala Thr Phe Trp Ile Gly
225                 230                 235                 240

Leu Trp Ser Val Leu Cys Phe Ile Ser Thr Ser Thr Thr Val Ala Thr
                245                 250                 255

Phe Leu Ile Asp Met Glu Arg Phe Arg Tyr Pro Glu Arg Pro Ile Ile
            260                 265                 270

Phe Leu Ser Ala Cys Tyr Leu Cys Val Ser Leu Gly Phe Leu Val Arg
        275                 280                 285

Leu Val Val Gly His Ala Ser Val Ala Cys Ser Arg Glu His Asn His
    290                 295                 300

Ile His Tyr Glu Thr Thr Gly Pro Ala Leu Cys Thr Ile Val Phe Leu
305                 310                 315                 320

Leu Val Tyr Phe Phe Gly Met Ala Ser Ser Ile Trp Trp Val Ile Leu
                325                 330                 335

Ser Leu Thr Trp Phe Leu Ala Ala Gly Met Lys Trp Gly Asn Glu Ala
            340                 345                 350
```

```
Ile Ala Gly Tyr Ala Gln Tyr Phe His Leu Ala Ala Trp Leu Ile Pro
        355                 360                 365

Ser Val Lys Ser Ile Thr Ala Leu Ala Leu Ser Ser Val Asp Gly Asp
    370                 375                 380

Pro Val Ala Gly Ile Cys Tyr Val Gly Asn Gln Asn Leu Asn Ser Leu
385                 390                 395                 400

Arg Gly Phe Val Leu Gly Pro Leu Val Leu Tyr Leu Leu Val Gly Thr
                405                 410                 415

Leu Phe Leu Leu Ala Gly Phe Val Ser Leu Phe Arg Ile Arg Ser Val
            420                 425                 430

Ile Lys Gln Gly Gly Thr Lys Thr Asp Lys Leu Glu Lys Leu Met Ile
        435                 440                 445

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

Val Ala Cys Tyr Leu Tyr Glu Gln His Tyr Arg Glu Ser Trp Glu Ala
465                 470                 475                 480

Ala Leu Thr Cys Ala Cys Pro Gly His Asp Thr Gly Gln Pro Arg Ala
                485                 490                 495

Lys Pro Glu Tyr Trp Val Leu Met Leu Lys Tyr Phe Met Cys Leu Val
            500                 505                 510

Val Gly Ile Thr Ser Gly Val Trp Ile Trp Ser Gly Lys Thr Val Glu
        515                 520                 525

Ser Trp Arg Arg Phe Thr Ser Arg Cys Cys Cys Arg Pro Arg Arg Gly
    530                 535                 540

His Lys Ser Gly Gly Ala Met Ala Ala Gly Asp Tyr Pro Glu Ala Ser
545                 550                 555                 560

Ala Ala Leu Thr Gly Arg Thr Gly Pro Pro Gly Pro Ala Ala Thr Tyr
```

565 570 575

His Lys Gln Val Ser Leu Ser His Val
580 585

<210> 25
<211> 246
<212> PRT
<213> Homo sapiens

<400> 25

Met Ala Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu Leu
1 5 10 15

Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro His Ser
20 25 30

Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro Gly Pro Arg
35 40 45

Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr Phe Leu His Tyr
50 55 60

Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser Pro Leu Gly Lys Lys
65 70 75 80

Leu Asn Val Thr Thr Ala Trp Lys Ala Gln Asn Pro Val Leu Arg Glu
85 90 95

Val Val Asp Ile Leu Thr Glu Gln Leu Arg Asp Ile Gln Leu Glu Asn
100 105 110

Tyr Thr Pro Lys Glu Pro Leu Thr Leu Gln Ala Arg Met Ser Cys Glu
115 120 125

Gln Lys Ala Glu Gly His Ser Ser Gly Ser Trp Gln Phe Ser Phe Asp
130 135 140

Gly Gln Ile Phe Leu Leu Phe Asp Ser Glu Lys Arg Met Trp Thr Thr
145 150 155 160

Val His Pro Gly Ala Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys
165 170 175

Val Val Ala Met Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly
180 185 190

Trp Leu Glu Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser
195 200 205

Ala Gly Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala
210 215 220

Thr Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
225 230 235 240

Phe Ile Leu Pro Gly Ile
245

<210> 26
<211> 10
<212> PRT
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<220>
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<220>
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<223> Xaa is Leu or any other amino acid

<400> 26

Gly Phe Thr Phe Ser Ser Tyr Xaa Met Ser
1 5 10

<210> 27
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<220>

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<222> (3)..(3)
<223> Xaa is Thr or Asn
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<223> Xaa is Ala or Ser

<220>
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<222> (10)..(10)
<223> Xaa is Glu or Asn

<220>
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<222> (11)..(11)
<223> Xaa is Thr or Lys

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa is Pro or Val

<400> 27

Xaa Ala Xaa Ile Ser Gly Gly Gly Xaa Xaa Xaa Tyr Tyr Xaa Asp Ser
1 5 10 15

Val Lys Gly

<210> 28
<211> 7
<212> PRT
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<220>
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<223> Xaa is Gln or any other amino acid

<220>
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<222> (2)..(2)
<223> Xaa is Leu or any other amino acid

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa is Tyr or a conservative substitution of Tyr

<220>
<221> misc_feature
<222> (4)..(4)
<223> Xaa is Tyr or any other amino acid

<220>
<221> misc_feature
<222> (5)..(5)
<223> Xaa is Phe or any other amino acid

<400> 28

Xaa Xaa Xaa Xaa Xaa Asp Tyr
1   5

<210> 29
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody HCDR1

<400> 29

Gly Phe Thr Phe Ser Ser Tyr Met Met Ser
1   5   10

<210> 30
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody HCDR2

<400> 30

Thr Ile Ser Gly Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser Val Lys
1   5   10   15

Gly

<210> 31
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody HCDR3

<400> 31

Gln Leu Tyr Tyr Phe Asp Tyr
1 5

<210> 32
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Xaa is Ser or a conservative substitution of Ser

<220>
<221> misc_feature
<222> (8)..(8)
<223> Xaa is Ser or a conservative substitution of Ser

<220>
<221> misc_feature
<222> (9)..(9)
<223> Xaa is Tyr or a conservative substitution of Tyr

<220>
<221> misc_feature
<222> (10)..(10)
<223> Xaa is Leu or a conservative substitution of Leu

<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa is Asn or Thr or a conservative substitution of Asn or Thr

<400> 32

Arg Ala Ser Gln Ser Ile Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 33
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Xaa is Ala or Thr or a conservative substitution of Ala or Thr

<220>
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<222> (3)..(3)
<223> Xaa is Ser or a conservative substitution of Ser

<220>
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<222> (6)..(6)
<223> Xaa is Gln or any other amino acid

<220>
<221> misc_feature
<222> (7)..(7)
<223> Xaa is Ser or any other amino acid

<400> 33

Xaa Ala Xaa Ser Leu Xaa Xaa
1 5

<210> 34
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> Xaa is Ser or any other amino acid

<220>
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<223> Xaa is Thr or any other amino acid

<220>
<221> misc_feature
<222> (8)..(8)
<223> Xaa is Trp or any other amino acid

<400> 34

Gln Gln Xaa Tyr Ser Xaa Pro Xaa Thr
1   5

<210> 35
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody LCDR1

<400> 35

Leu Ala Ser Gln Thr Ile Gly Thr Trp Leu Thr
1   5   10

<210> 36
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody LCDR2

<400> 36

Thr Ala Thr Ser Leu Ala Asp
1   5

<210> 37
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> MAb005 murine/humanized antibody LCDR3

<400> 37

Gln Gln Val Tyr Ser Ile Pro Trp Thr
1   5

<210> 38
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR1

<400> 38

Gly Phe Thr Phe Ser Ser Tyr Leu Met Ser
1 5 10

<210> 39
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR2

<400> 39

Val Ala Thr Ile Ser Gly Gly Gly Ser Glu Lys Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

<210> 40
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 40

Gln Leu Tyr Gly Phe Asp Tyr
1 5

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

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 41

Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Asn
1 5 10

<210> 42
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 42

Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 43
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR3

<400> 43

Gln Gln Ser Tyr Ser Thr Pro Trp Thr
1 5

<210> 44
<211> 7
<212> PRT
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<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<400> 44

Gln Val Tyr Tyr Phe Asp Tyr
1 5

<210> 45
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<400> 45

Gln Leu Tyr Phe Phe Asp Tyr
1   5

<210> 46
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<400> 46

Gln Leu Tyr Ala Phe Asp Tyr
1   5

<210> 47
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 47

Gln Gln Ser Tyr Ser Ile Pro Trp Thr
1   5

<210> 48
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<400> 48

Val Ala Thr Ile Ser Gly Gly Gly Ser Glu Thr Tyr Tyr Val Asp Ser
1   5   10   15

Val Lys Gly

<210> 49
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR2

<400> 49

Val Ala Thr Ile Ser Gly Gly Gly Ala Glu Lys Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

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

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 50

Ala Ala Ser Ser Leu Gln Asp
1 5

<210> 51
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<400> 51

Val Ala Thr Ile Ser Gly Gly Gly Ser Asn Thr Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

<210> 52
<211> 11
<212> PRT

<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 52

Arg Ala Ser Gln Ser Ile Ser Thr Trp Leu Asn
1 5 10

<210> 53
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 53

Ala Ala Ser Ser Leu Ala Ser
1 5

<210> 54
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 54

Ala Ala Ser Ser Leu His Ser
1 5

<210> 55
<211> 10
<212> PRT
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<220>
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<220>
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<223> Xaa is Ala, Asp, Glu, Phe, His, Ile, Leu, Asn, Pro,
Gln, Ser, Thr, Val, Trp or Tyr

<400> 55

Gly Phe Thr Phe Ser Ser Tyr Xaa Met Ser
1 5 10

<210> 56
<211> 19
<212> PRT
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<220>
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<220>
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<223> Xaa is Thr or Asn

<220>
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<222> (9)..(9)
<223> Xaa is Ser or Ala

<220>
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<222> (10)..(10)
<223> Xaa is Glu or Asn

<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa is Thr or Lys

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa is Val or Pro

<400> 56

Val Ala Xaa Ile Ser Gly Gly Gly Xaa Xaa Xaa Tyr Tyr Xaa Asp Ser
1 5 10 15

Val Lys Gly

<210> 57
<211> 7
<212> PRT
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<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<220>
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<222> (1)..(1)
<223> Xaa is Gln, Leu, Met, Asn or Thr

<220>
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<222> (2)..(2)
<223> Xaa is Leu, Gly, Lys, Gln, Met, Ser or Val

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa is Tyr or His

<220>
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<222> (4)..(4)
<223> Xaa is Tyr, Ala, Asp, Gly, Phe or Met

<220>
<221> misc_feature
<222> (5)..(5)
<223> Xaa is Phe, Ala, Asp, Glu, Ile, Lys, Met, Ser, Trp or Tyr

<400> 57

Xaa Xaa Xaa Xaa Xaa Asp Tyr
1   5

<210> 58
<211> 10
<212> PRT
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<220>
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<220>
<221> misc_feature
<222> (8)..(8)
<223> Xaa is Leu, Ala or Ser

<400> 58

Gly Phe Thr Phe Ser Ser Tyr Xaa Met Ser
1   5   10

<210> 59
<211> 19
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<220>
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<223> Xaa is Ser or Ala

<220>
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<222> (10)..(10)
<223> Xaa is Glu or Asn

<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa is Thr or Lys

<400> 59

Val Ala Thr Ile Ser Gly Gly Gly Xaa Xaa Xaa Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

<210> 60
<211> 7
<212> PRT
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<220>
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<220>
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<222> (2)..(2)
<223> Xaa is Leu or Val

<220>
<221> misc_feature
<222> (4)..(4)
<223> Xaa is Tyr, Gly, Phe or Ala

<220>
<221> misc_feature
<222> (5)..(5)
<223> Xaa is Phe, Tyr or Ala

<400> 60

Gln Xaa Tyr Xaa Xaa Asp Tyr
1 5

<210> 61
<211> 11
<212> PRT
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<220>
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<220>
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<223> Xaa is Thr or Ser

<220>
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<222> (7)..(7)
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<220>
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<222> (8)..(8)
<223> Xaa is Thr or Ser

<220>
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<222> (9)..(9)
<223> Xaa is Trp or Tyr

<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa is Thr or Asn

<400> 61

Arg Ala Ser Gln Xaa Ile Xaa Xaa Xaa Leu Xaa
1 5 10

<210> 62
<211> 7

<212> PRT
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<220>
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<220>
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<222> (1)..(1)
<223> Xaa is Thr or Ala

<220>
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<222> (3)..(3)
<223> Xaa is Thr or Ser

<220>
<221> misc_feature
<222> (6)..(6)
<223> Xaa is Ala, Gln or His

<220>
<221> misc_feature
<222> (7)..(7)
<223> Xaa is Asp or Ser

<400> 62

Xaa Ala Xaa Ser Leu Xaa Xaa
1 5

<210> 63
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (3)..(3)
<223> Xaa is Val or Ser

<220>
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<222> (6)..(6)
<223> Xaa is Ile or Thr

<220>
<221> misc_feature

<222> (8)..(8)
<223> Xaa is Trp or Leu

<400> 63

Gln Gln Xaa Tyr Ser Xaa Pro Xaa Thr
1 5

<210> 64
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (7)..(7)
<223> Xaa is Gly or Ser

<220>
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<222> (8)..(8)
<223> Xaa is Thr or Ser

<220>
<221> misc_feature
<222> (9)..(9)
<223> Xaa is Trp or Tyr

<400> 64

Arg Ala Ser Gln Ser Ile Xaa Xaa Xaa Leu Asn
1 5 10

<210> 65
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (6)..(6)
<223> Xaa is Gln or His

<400> 65

Ala Ala Ser Ser Leu Xaa Ser
1 5

<210> 66
<211> 9
<212> PRT
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<220>
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<220>
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<222> (6)..(6)
<223> Xaa is Ile or Thr

<400> 66

Gln Gln Ser Tyr Ser Xaa Pro Trp Thr
1 5

<210> 67
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR1

<400> 67

Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser
1 5 10

<210> 68
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR2

<400> 68

Val Ala Thr Ile Ser Gly Gly Gly Ser Asn Lys Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

<210> 69
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 69

Ala Ala Thr Ser Leu Ala Ser
1 5

<210> 70
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR2

<400> 70

Val Ala Thr Ile Ser Gly Gly Gly Ala Glu Thr Tyr Tyr Val Asp Ser
1 5 10 15

Val Lys Gly

<210> 71
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 71

Thr Ala Ser Ser Leu Gln Asp
1 5

<210> 72
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<400> 72

Gln Leu Tyr Tyr Ala Asp Tyr
1   5

<210> 73
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 73

Thr Ala Ser Ser Leu Ala Asp
1   5

<210> 74
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 74

Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
1   5   10

<210> 75
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR1

<400> 75

Gly Phe Thr Phe Ser Ser Tyr Ser Met Ser
1   5   10

<210> 76
<211> 11
<212> PRT

<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 76

Arg Ala Ser Gln Ser Ile Gly Thr Tyr Leu Asn
1 5 10

<210> 77
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 77

Ala Ala Thr Ser Leu Gln Ser
1 5

<210> 78
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 78

Arg Ala Ser Gln Ser Ile Gly Ser Tyr Leu Asn
1 5 10

<210> 79
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 79

Thr Ala Ser Ser Leu Gln Ser
1 5

<210> 80

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

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR1

<400> 80

Gly Phe Thr Phe Ser Ser Tyr Pro Met Ser
1 5 10

<210> 81
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR3

<400> 81

Gln Leu Tyr Tyr Tyr Asp Tyr
1 5

<210> 82
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR2

<400> 82

Ala Ala Ser Ser Leu Gln Tyr
1 5

<210> 83
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> TCED+ and HAF peptide

<400> 83

Val Thr Ile Thr Cys Leu Ala Ser Gln
1 5

<210> 84
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> converted TCED+ and HAF peptide

<400> 84

Val Thr Ile Thr Cys Arg Ala Ser Gln
1 5

<210> 85
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> LAF peptide

<400> 85

Ile Gly Thr Trp Leu Thr Trp Tyr Gln
1 5

<210> 86
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> converted LAF peptide

<400> 86

Ile Ser Ser Trp Leu Asn Trp Tyr Gln
1 5

<210> 87
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> HAF peptide

<400> 87

Leu Leu Ile Tyr Thr Ala Thr Ser Leu

1 5

<210> 88
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> HAF peptide

<400> 88

Leu Ile Tyr Thr Ala Thr Ser Leu Ala
1 5

<210> 89
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> LAF peptide

<400> 89

Ile Tyr Thr Ala Thr Ser Leu Ala Asp
1 5

<210> 90
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> LAF peptide

<400> 90

Tyr Tyr Cys Gln Gln Val Tyr Ser Ile
1 5

<210> 91
<211> 9
<212> PRT
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<220>
<223> LAF peptide

<400> 91

Leu Tyr Tyr Phe Asp Tyr Trp Gly Gln
1 5

<210> 92
<211> 19
<212> PRT
<213> Mus musculus

<400> 92

Val Ala Thr Ile Ser Gly Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser
1 5 10 15

Val Lys Gly

<210> 93
<211> 5
<212> PRT
<213> Homo sapiens

<400> 93

Arg Asp Glu Leu Thr
1 5

<210> 94
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<213> Homo sapiens

<400> 94

Arg Glu Glu Met
1

<210> 95
<211> 10
<212> PRT
<213> Mus musculus

<400> 95

Gly Phe Thr Phe Ser Ser Tyr Met Met Ser
1 5 10

<210> 96

<211> 5
<212> PRT
<213> Mus musculus

<400> 96

Ser Tyr Met Met Ser
1 5

<210> 97
<211> 7
<212> PRT
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<400> 97

Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 98
<211> 8
<212> PRT
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<400> 98

Gly Phe Thr Phe Ser Ser Tyr Met
1 5

<210> 99
<211> 6
<212> PRT
<213> Mus musculus

<400> 99

Ser Ser Tyr Met Met Ser
1 5

<210> 100
<211> 17
<212> PRT
<213> Mus musculus

<400> 100

Thr Ile Ser Gly Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 101
<211> 6
<212> PRT
<213> Mus musculus

<400> 101

Ser Gly Gly Gly Ala Asn
1 5

<210> 102
<211> 8
<212> PRT
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<400> 102

Ile Ser Gly Gly Gly Ala Asn Thr
1 5

<210> 103
<211> 16
<212> PRT
<213> Mus musculus

<400> 103

Ile Ser Gly Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser Val Lys Gly
1 5 10 15

<210> 104
<211> 10
<212> PRT
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<400> 104

Thr Ile Ser Gly Gly Gly Ala Asn Thr Tyr
1 5 10

<210> 105
<211> 12
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<400> 105

Val Ala Thr Ile Ser Gly Gly Gly Ala Asn Thr Tyr
1 5 10

<210> 106
<211> 7
<212> PRT
<213> Mus musculus

<400> 106

Gln Leu Tyr Tyr Phe Asp Tyr
1 5

<210> 107
<211> 9
<212> PRT
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<400> 107

Ala Arg Gln Leu Tyr Tyr Phe Asp Tyr
1 5

<210> 108
<211> 6
<212> PRT
<213> Mus musculus

<400> 108

Gln Leu Tyr Tyr Phe Asp
1 5

<210> 109
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<400> 109

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1 5

<210> 110
<211> 11
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<400> 110

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Gln Thr Ile Gly Thr Trp
1 5

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Gly Thr Trp Leu Thr Trp Tyr
1 5

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Thr Ala Thr Ser Leu Ala Asp
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<400> 115

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<400> 116

Gln Gln Val Tyr Ser Ile Pro Trp Thr
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Val Tyr Ser Ile Pro Trp
1 5

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Gln Gln Val Tyr Ser Ile Pro Trp
1 5

<210> 119
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<400> 119

Glu Val Met Leu Val Glu Ser Gly Gly Gly 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

Met Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
        35   40   45

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

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

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

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

Thr Val Ser Ser
        115

<210> 120
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> PD1-VH1 IGHV3-7

<400> 120

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

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

Met Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45

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

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

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


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


Thr Val Ser Ser
        115


<210>  121
<211>  107
<212>  PRT
<213>  Mus musculus

<400>  121

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


Glu Gly Val Thr Ile Thr Cys Leu Ala Ser Gln Thr Ile Gly Thr Trp
            20                  25                  30


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


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


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


Glu Asp Phe Val Thr Tyr Tyr Cys Gln Gln Val Tyr Ser Ile Pro Trp
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
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<210>  122
<211>  107
<212>  PRT
<213>  Artificial Sequence

<220>
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<223> PD1-VL1 IGKV1-39

<400> 122

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Asp Arg Val Thr Ile Thr Cys Leu Ala Ser Gln Thr Ile Gly Thr Trp
            20                  25                  30


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


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


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


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


Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 123
<211> 11
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<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 123

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Arg Ala Ser Gln Ser Ile Gly Ser Trp Leu Thr
1               5                   10
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<210> 124
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR1

<400> 124

Arg Ala Ser Gln Ser Ile Gly Thr Trp Leu Asn
1 5 10

<210> 125
<211> 11
<212> PRT
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<220>
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<400> 125

Arg Ala Ser Gln Ser Ile Ser Ser Trp Leu Thr
1 5 10

<210> 126
<211> 11
<212> PRT
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<220>
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<400> 126

Arg Ala Ser Gln Ser Ile Ser Thr Trp Leu Thr
1 5 10

<210> 127
<211> 11
<212> PRT
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<220>
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<400> 127

Arg Ala Ser Gln Ser Ile Ser Thr Tyr Leu Asn
1 5 10

<210> 128
<211> 7
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<220>

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<400> 128

Ala Ala Ser Ser Leu Ala Asp
1 5

<210> 129
<211> 7
<212> PRT
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<220>
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1 5

<210> 130
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<220>
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<400> 130

Thr Ala Thr Ser Leu Ala Ser
1 5

<210> 131
<211> 7
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<213> Artificial Sequence

<220>
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<400> 131

Thr Ala Thr Ser Leu Gln Asp
1 5

<210> 132
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding LCDR3

<400> 132

Gln Gln Ser Tyr Ser Ile Pro Leu Thr
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<210> 133
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 133

Gln Gln Val Tyr Ser Ile Pro Leu Thr
1   5

<210> 134
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 134

Gln Gln Val Tyr Ser Thr Pro Trp Thr
1   5

<210> 135
<211> 10
<212> PRT
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<220>
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<400> 135

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<210> 136
<211> 10

<212> PRT
<213> Artificial Sequence

<220>
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<400> 136

Gly Phe Thr Phe Ser Ser Tyr Glu Met Ser
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<210> 137
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> anti-PD1 antibody molecule or antigen-binding HCDR1

<400> 137

Gly Phe Thr Phe Ser Ser Tyr Phe Met Ser
1 5 10

<210> 138
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 138

Gly Phe Thr Phe Ser Ser Tyr Gly Met Ser
1 5 10

<210> 139
<211> 10
<212> PRT
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<220>
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<400> 139

Gly Phe Thr Phe Ser Ser Tyr His Met Ser
1 5 10

<210> 140
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<212> PRT
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<220>
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<400> 140

Gly Phe Thr Phe Ser Ser Tyr Ile Met Ser
1 5 10

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<212> PRT
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<220>
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<400> 141

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<400> 146

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<210> 147
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<212> PRT
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<400> 147

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Val Lys Gly

<210> 148
<211> 19
<212> PRT
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<400> 148

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Val Lys Gly

<210> 149
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<400> 149

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Val Lys Gly

<210> 150
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<400> 150

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Val Lys Gly

<210> 151
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Val Lys Gly

<210> 152
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Val Lys Gly

<210> 153
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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

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Val Lys Gly

<210> 161
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Val Lys Gly

<210> 162
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Val Lys Gly

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Val Lys Gly

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<400> 164

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Val Lys Gly

<210> 165
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<400> 166

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<210> 168
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<210> 175
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<210> 176
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1   5

<210> 179
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1   5

<210> 180
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<210> 181
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1   5

<210> 182
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<400> 182

Thr Leu Tyr Tyr Phe Asp Tyr
1   5