SEQUENCE LISTING

<110> MAB Discovery GmbH

<120> Humanized anti-IL-1R3 antibodies

<130> B198-0007WO1

<160> 175

<170> PatentIn version 3.5

<210> 1
<211> 118
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 1

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Glu Val Gln Leu Glu 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 Ser Phe Ser Ser Ser
            20                  25                  30


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


Val Ser Cys Ile Tyr Thr Gly Ser Gly Gly Thr Tyr Tyr Ala Ser Trp
    50                  55                  60


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


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


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


Leu Val Thr Val Ser Ser
        115
```

<210> 2
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 2

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

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

His Tyr Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ser Cys Ile Tyr Ala Gly Ser Ser Gly Asn Thr Tyr Tyr Ala Asn
50 55 60

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

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

Phe Cys Ala Arg Val Asp Ala Ser Ser Ser Gly Ser Trp Asp Leu Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 3
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 3

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

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Ser Tyr
20 25 30

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

Ser Val Ile Thr Ser Ser Ala Thr Thr Tyr Tyr Ala Ser Trp Ala Lys
50 55 60

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

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

Arg Gly Gly Pro Gly Tyr Ser Thr Asn Thr His Tyr Ala Phe Asp Pro
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 4
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 4

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

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Asp Asn Tyr
            20                  25                  30

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

Ala Val Ile Ser Ser Asp Gly Phe Phe Tyr Asp Ala Ser Trp Ala Lys
    50                  55                  60

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

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

Arg Asp Arg Gly Thr Ser Thr Gly Ser Leu Asp Leu Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115
```

<210> 5
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 5

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

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

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

Ser Ile Ile Ser Gly Ser Ala Ser Thr Tyr Tyr Ala Thr Trp Ala Lys
    50                  55                  60
```

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

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

Arg Thr His Tyr Ala Ala Val Ala Gly Tyr Gly Tyr Ala Ser Arg Leu
            100                 105                 110

Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120                 125
```

<210> 6
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 6

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Asn
            20                  25                  30

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

Val Ser Cys Ile Tyr Thr Ser Thr Gly Asn Thr Trp Tyr Ala Ser Trp
    50                  55                  60

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

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

Cys Ala Arg Asp Leu Leu Val Val Thr Ser Phe Asn Leu Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 7
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 7

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

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

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

Val Ser Cys Ile Tyr Ala Gly Ser Ser Gly Val Thr Tyr Tyr Ala Ser
50 55 60

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

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

Phe Cys Ala Ser Glu Thr Asp Gly Asn Tyr Phe Asn Leu Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 8
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 8

Glu Val Gln Leu Glu Gln 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 Ser Leu Ser Thr Ser
20 25 30

Tyr Trp Arg Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

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

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

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

Tyr Cys Ala Ser Gly Val Gly Phe Gly Tyr Phe Asn Leu Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 9
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 9

Glu Val Gln Leu Glu 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 Ile Asp Phe Ser Ser Tyr
20 25 30

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

Val Ser Cys Ile Phe Ile Gly Tyr Gly Asp Val Thr Trp Tyr Ala Ser
50 55 60

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

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

Phe Cys Ala Arg Ala Leu Gly Ser Ser Gly Tyr Arg Val Asn Leu Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 10
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 10

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

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

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

Ser Met Ile Tyr Gly Ser Gly Tyr Thr Tyr Tyr Ala Ser Trp Ala Lys
    50                  55                  60

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

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

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

Val Ser Ser
        115
```

<210> 11
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 11

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

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

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

Ser Thr Ile Tyr Ile Gly Gly Thr Thr Ala Tyr Ala Ser Trp Pro Lys
    50                  55                  60

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

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

Arg Leu Gln Gly Ala Asn Tyr Tyr Asn Ser Leu Ala Leu Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 12
<211> 120

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 12

```
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 Asp Phe Ser Ser Asn
            20                  25                  30

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

Val Ser Cys Ile Tyr Thr Asn Ser Gly Asn Thr Trp Ser Ala Ser Trp
    50                  55                  60

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 13
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 13

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

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

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

Val Ser Cys Ile Tyr Gly Asp Ser Ser Asp Thr Leu Tyr Ala Asn Trp
    50                  55                  60

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

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

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

Thr Leu Val Thr Val Ser Ser
        115
```

<210> 14
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 14

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

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

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

Val Ser Cys Ile Tyr Ala Gly Ser Ser Gly Ser Thr Tyr Tyr Ala Ser
    50                  55                  60

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

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

Phe Cys Ala Arg Val Asp Gly Ser Ser Ser Gly Ser Trp Asp Leu Trp
            100                 105                 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 15
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 15

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

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile Ser Phe Ser Ser Ser
            20                  25                  30

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

Val Ser Cys Ile Tyr Ala Gly Ser Ser Val Ser Ile Tyr Tyr Ala Thr
    50                  55                  60

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

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

Phe Cys Ala Arg Ser Thr Gly Ser Val Gly Arg Gly Phe Asn Leu Trp
            100                 105                 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 16
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 16

```
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 Ser Phe Ser Ser Ile
            20                  25                  30

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

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

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

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

Phe Cys Ala Arg Phe Arg Asp Asp Tyr Ala Ser Leu Lys Leu Trp Gly
            100                 105                 110
```

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 17
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 17

Glu Val Gln Leu Glu 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 Ser Phe Ser Ser Gly
20 25 30

Tyr Asp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ser Cys Ile Tyr Thr Gly Ser Gly Ser Thr Tyr Tyr Ala Asn Trp
50 55 60

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

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 18
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 18

Glu Val Gln Leu Glu Gln 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 Ser Phe Ser Ser Ser
20 25 30

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

```
Val Ala Cys Ile Tyr Thr Gly Ser Gly Gly Thr Tyr Tyr Ala Ser Trp
    50                  55                  60

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

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

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

Val Thr Val Ser Ser
        115
```

<210> 19
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 19

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

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

His Tyr Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
        35                  40                  45

Val Ala Cys Ile Tyr Ala Gly Ser Ser Gly Asn Thr Tyr Tyr Ala Asn
    50                  55                  60

Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Thr Asn Ser Lys Asn Thr
65                  70                  75                  80

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

Phe Cys Ala Arg Val Asp Ala Ser Ser Ser Gly Ser Trp Asp Leu Trp
            100                 105                 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 20
<211> 122
<212> PRT
<213> Artificial Sequence

<220>

<223> humanized antibody

<400> 20

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

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Ser Tyr
20 25 30

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

Gly Val Ile Thr Ser Ser Ala Thr Thr Tyr Tyr Ala Ser Trp Ala Lys
50 55 60

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

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

Gly Gly Pro Gly Tyr Ser Thr Asn Thr His Tyr Ala Phe Asp Pro Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 21
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 21

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

Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Asp Asn Tyr
20 25 30

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

Ala Val Ile Ser Ser Asp Gly Phe Phe Tyr Asp Ala Ser Trp Ala Lys
50 55 60

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

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

Arg Asp Arg Gly Thr Ser Thr Gly Ser Leu Asp Leu Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 22
<211> 123
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 22

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

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

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

Ala Ile Ile Ser Gly Ser Ala Ser Thr Tyr Tyr Ala Thr Trp Ala Lys
50 55 60

Gly Arg Phe Thr Ile Ser Lys Thr Ser Thr Thr Leu Tyr Leu Gln Met
65 70 75 80

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

His Tyr Ala Ala Val Ala Gly Tyr Gly Tyr Ala Ser Arg Leu Asp Leu
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 23
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 23

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Asn
20 25 30

```
Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Leu
        35                  40                  45

Val Ala Cys Ile Tyr Thr Ser Thr Gly Asn Thr Trp Tyr Ala Ser Trp
    50                  55                  60

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

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

Cys Ala Arg Asp Leu Leu Val Val Thr Ser Phe Asn Leu Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 24
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 24

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

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

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

Val Ala Cys Ile Tyr Ala Gly Ser Ser Gly Val Thr Tyr Tyr Ala Ser
    50                  55                  60

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

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

Cys Ala Ser Glu Thr Asp Gly Asn Tyr Phe Asn Leu Trp Gly Gln Gly
            100                 105                 110

Thr Leu Val Thr Val Ser Ser
        115
```

<210> 25
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 25

Glu Val Gln Leu Glu Gln 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 Ser Leu Ser Thr Ser
20 25 30

Tyr Trp Arg Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

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

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

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

Tyr Cys Ala Ser Gly Val Gly Phe Gly Tyr Phe Asn Leu Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 26
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 26

Glu Val Gln Leu Glu 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 Ile Asp Phe Ser Ser Tyr
20 25 30

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

Val Ala Cys Ile Phe Ile Gly Tyr Gly Asp Val Thr Trp Tyr Ala Ser
50 55 60

```
Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Ala Asn Ser Lys Asn Thr
65                  70                  75                  80


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


Phe Cys Ala Arg Ala Leu Gly Ser Ser Gly Tyr Arg Val Asn Leu Trp
            100                 105                 110


Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210>  27
<211>  113
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  27

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


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


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


Ala Met Ile Tyr Gly Ser Gly Tyr Thr Tyr Tyr Ala Ser Trp Ala Lys
    50                  55                  60


Gly Arg Phe Thr Ile Ser Thr Thr Ser Thr Thr Leu Tyr Leu Gln Met
65                  70                  75                  80


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


Pro Gln Tyr Phe Ile Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser
            100                 105                 110


Ser



<210>  28
<211>  120
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  28
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```
Glu Val Gln Leu Glu Glu Ser Gly Gly Arg Leu Val Gln Pro Gly Thr
1               5                   10                  15

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

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

Ser Thr Ile Tyr Ile Gly Gly Thr Thr Ala Tyr Ala Ser Trp Pro Lys
    50                  55                  60

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

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

Arg Leu Gln Gly Ala Asn Tyr Tyr Asn Ser Leu Ala Leu Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 29
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 29

```
Gln 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 Asp Phe Ser Ser Asn
            20                  25                  30

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

Val Ala Cys Ile Tyr Thr Asn Ser Gly Asn Thr Trp Ser Ala Ser Trp
    50                  55                  60

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

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

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

Thr Leu Val Thr Val Ser Ser
        115

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

<220>
<223> humanized antibody

<400> 30

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

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

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

Val Ala Cys Ile Tyr Gly Asp Ser Ser Asp Thr Leu Tyr Ala Asn Trp
    50   55   60

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

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

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

Thr Leu Val Thr Val Ser Ser
        115

<210> 31
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 31

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

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

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

```
Val Ala Cys Ile Tyr Ala Gly Ser Ser Gly Ser Thr Tyr Tyr Ala Ser
    50                  55                  60

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

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

Ala Arg Val Asp Gly Ser Ser Ser Gly Ser Trp Asp Leu Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 32
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 32

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile Ser Phe Ser Ser Ser
            20                  25                  30

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

Val Ala Cys Ile Tyr Ala Gly Ser Ser Val Ser Ile Tyr Tyr Ala Thr
    50                  55                  60

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

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

Cys Ala Arg Ser Thr Gly Ser Val Gly Arg Gly Phe Asn Leu Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 33
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 33

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 Ser Phe Ser Ser Ile
20 25 30

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

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

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 34
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 34

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

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

Tyr Asp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Gly Cys Ile Tyr Thr Gly Ser Gly Ser Thr Tyr Tyr Ala Asn Trp
50 55 60

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

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


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


Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210>  35
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  35

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


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


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


Tyr Leu Ala Ser Thr Leu Ala 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 Asn Trp Trp Val Ile Glu His
                85                  90                  95


Asn Gly Ala Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110


<210>  36
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  36

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 Gln Ala Ser Glu Ser Ile Tyr Ser Asn
            20                  25                  30
```

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

Tyr Ala Ala Ser Leu Leu Ala 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 Ser Ala Ser Tyr Ser Thr Gly
                85                  90                  95

Pro Asp Trp Thr Phe Gly Gln Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 37
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 37

```
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 Gln Ala Ser Gln Ser Ile Tyr Ile Tyr
            20                  25                  30

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

Tyr Asp Ala Ser Lys Leu Ala 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 Gly Ala Thr Thr Tyr Asn
                85                  90                  95

Val Asp Asn Val Phe Gly Gln Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 38
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 38

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

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

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

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

Tyr Ile Gly Gly Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 39
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 39

```
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 Leu Ala Ser Glu Asp Ile Tyr Ser Gly
            20                  25                  30

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

Tyr Ala Ala Ser Asn Leu Glu 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 Leu Gly Gly Tyr Ser Tyr Ser Asn
                85                  90                  95

Thr Gly Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 40
<211> 113

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 40

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

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

Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
35 40 45

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

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

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

Thr Asp Asp Leu Tyr Asn Ala Phe Gly Gln Gly Thr Lys Val Val Ile
100 105 110

Lys

<210> 41
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 41

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

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

Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
35 40 45

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

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

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


Asp Ile His Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110


<210>  42
<211>  110
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  42

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


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


Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45


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


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


Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gly Val Tyr Thr His Ile Ser
                85                  90                  95


Ala Asp Asn Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110


<210>  43
<211>  111
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  43

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 Gln Ala Ser Glu Asn Ile Tyr Ser Ser
            20                  25                  30


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

```
Tyr Asp Ala Ser Asp Leu Ala 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 Gly Tyr Tyr Ser Gly Gly
                85                  90                  95

Thr Asp Asn Asp Val Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 44
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 44

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

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

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

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

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

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

Ser Ser Trp Tyr Asn Val Phe Gly Gln Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 45
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 45

```
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 Gln Ala Ser Gln Ser Ile Tyr Ser Phe
            20                  25                  30

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

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

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

<210> 46
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 46

```
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 Gln Ala Ser Gln Ser Ile Gly Tyr Tyr
            20                  25                  30

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

Tyr Arg Ala Ser Thr Leu Ala 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 Ser Tyr Tyr Asn Ser Asp Ser
                85                  90                  95

Asp Ala Phe Gly Gln Gly Thr Lys Val Val Ile Lys
            100                 105
```

<210> 47
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 47

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

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

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

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

Ile Asp Asn Thr Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 48
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 48

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 Gln Ala Ser Gln Asn Ile Tyr Ser Asn
20 25 30

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

Tyr Ala Ala Ser Leu Leu Ala 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 Gly Ala Val Tyr Ser Gly Asn
85 90 95

Thr Glu Trp Ala Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 49
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 49

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

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

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

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

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

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

Val Ser Ala Asp Cys Ile Ala Phe Gly Gly Gly Thr Lys Val Val Ile
100 105 110

Lys

<210> 50
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 50

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 Gln Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

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

```
Tyr Gly Ala Ser Asn Leu Ala 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 Cys Thr Tyr Tyr Asp Asn Asn
                85                  90                  95

Tyr Gly Gly Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 51
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 51

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

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

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

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

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

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

Ser Gly Ser Tyr His Ser Trp Ala Phe Gly Gln Gly Thr Lys Val Val
            100                 105                 110

Ile Lys
```

<210> 52
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 52

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

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

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

Tyr Leu Ala Ser Thr Leu Ala 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 Asn Trp Trp Val Ile Glu His
                85                  90                  95

Asn Gly Ala Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 53
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 53

```
Ala 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 Gln Ala Ser Glu Ser Ile Tyr Ser Asn
            20                  25                  30

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

Tyr Ala Ala Ser Leu Leu Ala 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 Ser Ala Ser Tyr Ser Thr Gly
                85                  90                  95

Pro Asp Trp Thr Phe Gly Gln Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 54
<211> 110

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 54

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

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

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

Tyr Asp Ala Ser Lys Leu Ala 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 Gly Ala Thr Thr Tyr Asn
85 90 95

Val Asp Asn Val Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 55
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 55

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

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

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

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

Tyr Ile Gly Gly Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 56
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 56

Ala 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 Leu Ala Ser Glu Asp Ile Tyr Ser Gly
20 25 30

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

Tyr Ala Ala Ser Asn 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 Leu Gly Gly Tyr Ser Tyr Ser Asn
85 90 95

Thr Gly Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 57
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 57

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

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

Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
35 40 45

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

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

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

Thr Asp Asp Leu Tyr Asn Ala Phe Gly Gln Gly Thr Lys Val Val Ile
100 105 110

Lys

<210> 58
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 58

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

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

Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
35 40 45

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

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

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

Asp Ile His Ala Phe Gly Gly Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 59
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 59

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

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

Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Leu Leu Ile
        35                  40                  45

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

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gly Val Tyr Thr His Ile Ser
                85                  90                  95

Ala Asp Asn Ala Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
```

<210> 60
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 60

```
Ala Leu 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 Gln Ala Ser Glu Asn Ile Tyr Ser Ser
            20                  25                  30

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

Tyr Asp Ala Ser Asp Leu Ala 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 Gly Tyr Tyr Ser Gly Gly
                85                  90                  95

Thr Asp Asn Asp Val Phe Gly Gly Gly Thr Lys Val Val Ile Lys
            100                 105                 110
```

<210> 61
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 61

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

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

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

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

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

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

Ser Ser Trp Tyr Asn Val Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 62
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 62

Asp Val 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 Gln Ala Ser Gln Ser Ile Tyr Ser Phe
20 25 30

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

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

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

<210> 63
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 63

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 Gln Ala Ser Gln Ser Ile Gly Tyr Tyr
20 25 30

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

Tyr Arg Ala Ser Thr Leu Ala 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 Ser Tyr Tyr Asn Ser Asp Ser
85 90 95

Asp Ala Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105

<210> 64
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 64

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

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

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

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

Ile Asp Asn Thr Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 65
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 65

Ala 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 Gln Ala Ser Gln Asn Ile Tyr Ser Asn
20 25 30

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

Tyr Ala Ala Ser Leu Leu Ala 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 Gly Ala Val Tyr Ser Gly Asn
85 90 95

Thr Glu Trp Ala Phe Gly Gln Gly Thr Lys Val Val Ile Lys
100 105 110

<210> 66
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 66

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

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

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

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

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

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

Val Ser Ala Asp Cys Ile Ala Phe Gly Gly Gly Thr Lys Val Val Ile
            100                 105                 110

Lys
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<210> 67
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 67

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

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

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

Tyr Gly Ala Ser Asn Leu Ala 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 Cys Thr Tyr Tyr Asp Asn Asn
                85                  90                  95

Tyr Gly Gly Ala Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
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<210> 68
<211> 114
<212> PRT
<213> Artificial Sequence

<220>

<223> humanized antibody

<400> 68

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

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

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

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

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

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

Ser Gly Ser Tyr His Ser Trp Ala Phe Gly Gln Gly Thr Lys Val Val
100 105 110

Ile Lys

<210> 69
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 69

Ser Ser Tyr Trp Ile Cys
1 5

<210> 70
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 70

Ser Ser His Tyr Met Cys
1 5

<210> 71
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 71

Ser Tyr Ala Met Gly
1 5

<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 72

Asn Tyr Ala Met Gly
1 5

<210> 73
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 73

Ser Tyr Tyr Met Ser
1 5

<210> 74
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 74

Ser Asn Tyr Trp Ile Cys
1 5

<210> 75
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 75

Ser Ser Tyr Tyr Met Cys
1 5

<210> 76
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 76

Thr Ser Tyr Trp Arg Cys
1 5

<210> 77
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 77

Ser Tyr Tyr Tyr Met Cys
1 5

<210> 78
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 78

Ser Tyr Trp Met Ser
1 5

<210> 79
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 79

Ser Tyr Asp Met Ser
1 5

<210> 80
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 80

Ser Asn Tyr Tyr Met Cys
1 5

<210> 81
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 81

Phe Gly Tyr Tyr Met Cys
1 5

<210> 82
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 82

Ser Thr Tyr Tyr Met Cys
1 5

<210> 83
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 83

Ser Ser Asp Phe Met Cys
1 5

<210> 84
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 84

Ser Ile Tyr Tyr Met Cys
1 5

<210> 85
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 85

Ser Gly Tyr Asp Met Cys
1 5

<210> 86
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 86

Cys Ile Tyr Thr Gly Ser Gly Gly Thr Tyr Tyr Ala Ser Trp Glu Lys
1 5 10 15

Gly

<210> 87
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 87

Cys Ile Tyr Ala Gly Ser Ser Gly Asn Thr Tyr Tyr Ala Asn Trp Ala
1 5 10 15

Lys Gly

<210> 88
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 88

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

<210> 89
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 89

Val Ile Ser Ser Asp Gly Phe Phe Tyr Asp Ala Ser Trp Ala Lys Gly
1 5 10 15

<210> 90
<211> 16

<212> PRT
<213> Artificial Sequence

<220>
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<400> 90

Ile Ile Ser Gly Ser Ala Ser Thr Tyr Tyr Ala Thr Trp Ala Lys Gly
1 5 10 15

<210> 91
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 91

Cys Ile Tyr Thr Ser Thr Gly Asn Thr Trp Tyr Ala Ser Trp Ala Lys
1 5 10 15

Gly

<210> 92
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 92

Cys Ile Tyr Ala Gly Ser Ser Gly Val Thr Tyr Tyr Ala Ser Trp Ala
1 5 10 15

Lys Gly

<210> 93
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 93

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

Asn Gly

<210> 94
<211> 18

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 94

Cys Ile Phe Ile Gly Tyr Gly Asp Val Thr Trp Tyr Ala Ser Trp Ala
1 5 10 15

Lys Gly

<210> 95
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 95

Met Ile Tyr Gly Ser Gly Tyr Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
1 5 10 15

<210> 96
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 96

Thr Ile Tyr Ile Gly Gly Thr Thr Ala Tyr Ala Ser Trp Pro Lys Gly
1 5 10 15

<210> 97
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 97

Cys Ile Tyr Thr Asn Ser Gly Asn Thr Trp Ser Ala Ser Trp Ala Lys
1 5 10 15

Gly

<210> 98
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

<223> humanized antibody

<400> 98

Cys Ile Tyr Gly Asp Ser Ser Asp Thr Leu Tyr Ala Asn Trp Ala Lys
1 5 10 15

Gly

<210> 99
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
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<400> 99

Cys Ile Tyr Ala Gly Ser Ser Gly Ser Thr Tyr Tyr Ala Ser Trp Ala
1 5 10 15

Lys Gly

<210> 100
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
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<400> 100

Cys Ile Tyr Ala Gly Ser Ser Val Ser Ile Tyr Tyr Ala Thr Trp Ala
1 5 10 15

Lys Gly

<210> 101
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 101

Cys Ile Tyr Thr Gly Asn Ser Asp Phe Thr Tyr Tyr Ala Asn Trp Ala
1 5 10 15

Lys Gly

<210> 102
<211> 17

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 102

Cys Ile Tyr Thr Gly Ser Gly Ser Thr Tyr Tyr Ala Asn Trp Ala Lys
1 5 10 15

Gly

<210> 103
<211> 8
<212> PRT
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<220>
<223> humanized antibody

<400> 103

Asp Pro Gly Tyr Ser Ser Trp Leu
1 5

<210> 104
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 104

Val Asp Ala Ser Ser Ser Gly Ser Trp Asp Leu
1 5 10

<210> 105
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 105

Gly Gly Pro Gly Tyr Ser Thr Asn Thr His Tyr Ala Phe Asp Pro
1 5 10 15

<210> 106
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 106

Asp Arg Gly Thr Ser Thr Gly Ser Leu Asp Leu
1 5 10

<210> 107
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 107

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

Leu

<210> 108
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
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<400> 108

Asp Leu Leu Val Val Thr Ser Phe Asn Leu
1 5 10

<210> 109
<211> 9
<212> PRT
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<220>
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<400> 109

Glu Thr Asp Gly Asn Tyr Phe Asn Leu
1 5

<210> 110
<211> 9
<212> PRT
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<220>
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<400> 110

Gly Val Gly Phe Gly Tyr Phe Asn Leu
1 5

<210> 111
<211> 11
<212> PRT
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<220>
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<400> 111

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

<210> 112
<211> 7
<212> PRT
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<220>
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<400> 112

Asp Pro Gln Tyr Phe Ile Leu
1 5

<210> 113
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 113

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

<210> 114
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 114

Asp Leu Asn Tyr Pro Asp Thr Ser Asn Leu
1 5 10

<210> 115
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 115

Tyr Pro Gly Gly Ser Tyr Tyr Asn Leu
1 5

<210> 116
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 116

Val Asp Gly Ser Ser Ser Gly Ser Trp Asp Leu
1 5 10

<210> 117
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 117

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

<210> 118
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 118

Phe Arg Asp Asp Tyr Ala Ser Leu Lys Leu
1 5 10

<210> 119
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 119

Asn Ser Asn Asp Trp Met Tyr Phe Asn Leu
1 5 10

<210> 120
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 120

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

<210> 121
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 121

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

<210> 122
<211> 11
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<213> Artificial Sequence

<220>
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<400> 122

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

<210> 123
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 123

Gln Ala Ser Glu Asn Ile Gly Asn Gly Leu Ala
1 5 10

<210> 124
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 124

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

<210> 125
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<400> 125

Gln Ala Ser Glu Asp Ile Tyr Ser Asn Leu Ala
1 5 10

<210> 126
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 126

Gln Ala Ser Glu Asp Ile Tyr Ser Asn Leu Ala
1 5 10

<210> 127
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 127

Gln Ala Ser Glu Asp Ile Tyr Ser Asn Leu Ala
1 5 10

<210> 128
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 128

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

<210> 129
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 129

Gln Ser Ser Gln Ser Val Asp Gly Asn Asn Leu Leu Ser
1 5 10

<210> 130
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 130

Gln Ala Ser Gln Ser Ile Tyr Ser Phe Leu Ser
1 5 10

<210> 131
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 131

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

<210> 132
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 132

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

<210> 133
<211> 11
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<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 133

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

<210> 134
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 134

Gln Ala Ser Gln Ser Val Tyr Asn Ser Asn His Leu Ser
1 5 10

<210> 135
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 135

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

<210> 136
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 136

Gln Ala Ser Glu Ser Ile Ser Ala Asn Tyr Trp Ser
1 5 10

<210> 137
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 137

Leu Ala Ser Thr Leu Ala Ser
1 5

<210> 138
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 138

Ala Ala Ser Leu Leu Ala Ser
1 5

<210> 139
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 139

Asp Ala Ser Lys Leu Ala Ser
1 5

<210> 140
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> humanized antibody

<400> 140

Gly Ala Ser Thr Leu Ala Ser
1 5

<210> 141
<211> 7
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<213> Artificial Sequence

<220>
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<400> 141

Ala Ala Ser Asn Leu Glu Ser
1 5

<210> 142
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 142

Gly Ala Ser Thr Leu Ala Ser
1 5

<210> 143
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 143

Arg Ala Ser Thr Leu Ala Ser
1 5

<210> 144
<211> 7
<212> PRT
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<220>
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<400> 144

Asp Ala Ser Thr Leu Ala Ser
1 5

<210> 145
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 145

Asp Ala Ser Asp Leu Ala Ser
1 5

<210> 146
<211> 7
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<213> Artificial Sequence

<220>
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<400> 146

Asp Ala Ser Asn Leu Ala Ser
1 5

<210> 147
<211> 7
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<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 147

Ala Ala Ser Asp Leu Glu Ser
1 5

<210> 148
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 148

Arg Ala Ser Thr Leu Ala Ser
1 5

<210> 149
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 149

Tyr Ala Ser Thr Leu Ala Ser
1 5

<210> 150
<211> 7

<212> PRT
<213> Artificial Sequence

<220>
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<400> 150

Ala Ala Ser Leu Leu Ala Ser
1 5

<210> 151
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 151

Ser Ala Ser Thr Leu Ala Ser
1 5

<210> 152
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 152

Gly Ala Ser Asn Leu Ala Ser
1 5

<210> 153
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 153

Gly Ala Ser Thr Leu Ala Ser
1 5

<210> 154
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 154

Gln Asn Trp Trp Val Ile Glu His Asn Gly Ala Ala
1 5 10

<210> 155
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 155

Gln Ser Ala Ser Tyr Ser Thr Gly Pro Asp Trp Thr
1 5 10

<210> 156
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 156

Gln Gln Gly Ala Thr Thr Tyr Asn Val Asp Asn Val
1 5 10

<210> 157
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 157

Gln Cys Thr Tyr Trp Asn Pro Asp Tyr Ile Gly Gly Ala
1 5 10

<210> 158
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 158

Leu Gly Gly Tyr Ser Tyr Ser Asn Thr Gly Pro Thr
1 5 10

<210> 159
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 159

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

<210> 160
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 160

Leu Gly Val Tyr Thr Tyr Ser Thr Asp Ile His Ala
1 5 10

<210> 161
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 161

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

<210> 162
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 162

Gln Gln Gly Tyr Tyr Ser Gly Gly Thr Asp Asn Asp Val
1 5 10

<210> 163
<211> 12
<212> PRT
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<220>
<223> humanized antibody

<400> 163

Gln Gly Ser Tyr Tyr Ser Ser Ser Trp Tyr Asn Val
1 5 10

<210> 164
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 164

Gln Cys Asn Tyr Ile Ile Asp Tyr Gly Ala
1 5 10

<210> 165
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 165

Gln Ser Tyr Tyr Asn Ser Asp Ser Asp Ala
1 5 10

<210> 166
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 166

Gln Gln Gly Tyr Thr Glu Asp Asn Ile Asp Asn Thr
1 5 10

<210> 167
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 167

Gln Gly Ala Val Tyr Ser Gly Asn Thr Glu Trp Ala
1 5 10

<210> 168
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 168

Gln Gly Glu Phe Ser Cys Val Ser Ala Asp Cys Ile Ala
1 5 10

<210> 169
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 169

Gln Cys Thr Tyr Tyr Asp Asn Asn Tyr Gly Gly Ala
1 5 10

<210> 170
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> humanized antibody

<400> 170

Gln Ser Trp Tyr Tyr Ser Gly Ser Gly Ser Tyr His Ser Trp Ala
1 5 10 15

<210> 171
<211> 107
<212> PRT
<213> Homo sapiens

<400> 171

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15

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

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
50 55 60

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

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 172
<211> 329
<212> PRT
<213> Homo sapiens

<400> 172

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 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
                325


<210>  173
<211>  123
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  humanized antibody

<400>  173

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


Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Ile Asp Leu Ser Ser Tyr
            20                  25                  30


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


Gly Val Ile Thr Ser Ser Ala Thr Thr Tyr Tyr Ala Ser Trp Ala Lys
    50                  55                  60


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


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


Arg Gly Gly Pro Gly Tyr Ser Thr Asn Thr His Tyr Ala Phe Asp Pro
            100                 105                 110


Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
        115                 120


<210>  174
<211>  108
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Humanized antibody

<400>  174

Asp Val 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 Gln Ala Ser Gln Ser Ile Tyr Ser Phe
            20                  25                  30
```

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

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

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

<210> 175
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 175

```
Gln Ser Asn Tyr Ile Ile Asp Tyr Gly Ala
1               5                   10
```