SEQUENCE LISTING

<110> Ganymed Pharmaceuticals GmbH et al.

<120> Antibodies useful in cancer diagnosis

<130> 342-99 PCT2

<150> PCT/EP2017/072386
<151> 2017-09-06

<160> 61

<170> PatentIn version 3.5

<210> 1
<211> 220
<212> PRT
<213> Homo sapiens

<400> 1

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


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


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


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


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


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


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


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

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

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

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

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

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

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

<210> 2
<211> 217
<212> PRT
<213> Homo sapiens

<400> 2

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

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

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

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

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

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

```
Val Ala Ile Thr Gly Ala Gln Cys Thr Thr Cys Val Glu Asp Glu Gly
            100                 105                 110


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


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


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


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


Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Pro Pro Gln Val Glu Arg
            180                 185                 190


Pro Arg Gly Pro Arg Leu Gly Tyr Ser Ile Pro Ser Arg Ser Gly Ala
        195                 200                 205


Ser Gly Leu Asp Lys Arg Asp Tyr Val
    210                 215


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

<400>  3

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


Trp Leu Gly Thr Ile Val Cys Cys Ala Leu Pro Met Trp Arg Val Ser
            20                  25                  30


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


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

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


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


Ala Leu Val Gly Ala Gln Cys Thr Asn Cys Val Gln Asp Asp Thr Ala
            100                 105                 110


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


Leu Leu Thr Leu Val Pro Val Ser Trp Ser Ala Asn Thr Ile Ile Arg
    130                 135                 140


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


Ala Gly Leu Tyr Val Gly Trp Ala Ala Ala Ala Leu Gln Leu Leu Gly
                165                 170                 175


Gly Ala Leu Leu Cys Cys Ser Cys Pro Pro Arg Glu Lys Lys Tyr Thr
            180                 185                 190


Ala Thr Lys Val Val Tyr Ser Ala Pro Arg Ser Thr Gly Pro Gly Ala
        195                 200                 205


Ser Leu Gly Thr Gly Tyr Asp Arg Lys Asp Tyr Val
    210                 215                 220


<210>  4
<211>  209
<212>  PRT
<213>  Homo sapiens

<400>  4

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


Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val
```

```
            20                  25                  30

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

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

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

Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu
                85                  90                  95

Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser
            100                 105                 110

Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala
        115                 120                 125

Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile
    130                 135                 140

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

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

Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro
            180                 185                 190

Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr
        195                 200                 205

Val
```

<210> 5
<211> 219
<212> PRT

<213> Mus musculus

<400> 5

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


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


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


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


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


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


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


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


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


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


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


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


Pro Arg His Tyr Met Ala Cys Tyr Ser Thr Ser Val Pro His Ser Arg
        195                 200                 205
```

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

<210> 6
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 6

Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His
1   5   10   15

Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro
            20   25   30

Ser Glu Tyr Pro Thr Lys Asn Tyr Val
        35   40

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

<220>
<223> Peptide

<400> 7

Leu Leu Cys Cys Ala Cys Ser Ser Gly Gly Thr Gln Gly Pro Arg His
1   5   10   15

Tyr Met Ala Cys Tyr Ser Thr Ser Val Pro His Ser Arg Gly Pro Ser
            20   25   30

Glu Tyr Pro Thr Lys Asn Tyr Val
        35   40

<210> 8
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 8

Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His Tyr Met Ala
1   5   10   15

Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr
            20   25   30

Pro Thr Lys Asn Tyr Val
        35

<210> 9
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 9

Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His Tyr
1   5   10

<210> 10
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 10

Pro Ser Gly Gly Ser Gln Gly Pro Ser His Tyr Met Ala Arg Tyr
1   5   10   15

<210> 11
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 11

Ser Gln Gly Pro Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala
1 5 10 15

<210> 12
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 12

Ser His Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser
1 5 10 15

<210> 13
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 13

Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser
1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 14

Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr Pro Thr
1 5 10 15

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

<220>

<223> Peptide

<400> 15

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

<210> 16
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 16

Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly
1 5 10 15

<210> 17
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 17

Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu
1 5 10 15

<210> 18
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 18

Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr
1 5 10 15

<210> 19
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 19

Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr Pro
1   5   10   15

<210> 20
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 20

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

<210> 21
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 21

Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn
1   5   10   15

<210> 22
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 22

Pro Ala Ile Ser Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr
1   5   10   15

<210> 23
<211> 14

<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 23

Ile Ser Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1   5   10

<210> 24
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 24

Ser Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1   5   10

<210> 25
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 25

Arg Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1   5   10

<210> 26
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 26

Gly Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1   5   10

<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 27

Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1 5 10

<210> 28
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 28

Ser Glu Tyr Pro Thr Lys Asn Tyr Val
1 5

<210> 29
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 29

Glu Tyr Pro Thr Lys Asn Tyr Val
1 5

<210> 30
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 30

Tyr Pro Thr Lys Asn Tyr Val
1 5

<210> 31
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 31

Pro Thr Lys Asn Tyr Val
1 5

<210> 32
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 32

Pro Thr Lys Asn Tyr
1 5

<210> 33
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 33

Pro Thr Lys Asn
1

<210> 34
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 34

```
Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His Tyr
1               5                   10                  15


Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser
            20                  25                  30


Glu Tyr Pro Thr Lys Asn Tyr Val
        35                  40
```

<210> 35
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 35

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


Arg Leu Gly Tyr Ser Ile Pro Ser Arg Ser Gly Ala Ser Gly Leu Asp
            20                  25                  30


Lys Arg Asp Tyr Val
        35
```

<210> 36
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 36

```
Leu Cys Cys Ser Cys Pro Pro Arg Glu Lys Lys Tyr Thr Ala Thr Lys
1               5                   10                  15


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


Thr Gly Tyr Asp Arg Lys Asp Tyr Val
        35                  40
```

<210> 37
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 37

Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro Tyr Ser Ala Lys
1 5 10 15

Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr Val
20 25

<210> 38
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 38

Glu Tyr Pro Thr Lys Asn Tyr
1 5

<210> 39
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 39

Arg Gly Pro Ser
1

<210> 40
<211> 114
<212> PRT
<213> Artificial Sequence

<220>

<223> Antibody chain

<400> 40

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

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

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

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

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

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

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

Ser Ser

<210> 41
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody chain

<400> 41

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

Gln Thr Ala Ser Ile Ser Cys Lys Ser Ser Gln Asn Leu Leu Tyr Ser
            20   25   30

```
Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

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

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
                85                  90                  95

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Asn Thr
            100                 105                 110
```

<210> 42
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody chain

<400> 42

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

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

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

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

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

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

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

Ser Ser

<210> 43
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody chain

<400> 43

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

Gln Thr Ala Ser Ile Ser Cys Lys Ser Ser Gln Asn Leu Leu Tyr Ser
20 25 30

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

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

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
85 90 95

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Thr
100 105 110

<210> 44
<211> 114
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody chain

<400> 44

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

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

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

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

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

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

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

Ser Ser

<210> 45
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> Antibody chain

<400> 45

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

Gln Thr Ala Ser Ile Ser Cys Lys Ser Ser Gln Asn Leu Leu Tyr Ser
20 25 30

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

Pro Lys Arg Leu Ile Tyr Leu Met Ser Lys Leu Glu Ser Gly Val Pro
    50   55   60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
                85   90   95

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Ser
            100   105   110

<210> 46
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 46

Cys Arg Asp Phe Tyr Asn Pro Leu Val Ala Glu Ala Gln Lys Arg Glu
1   5   10   15

Leu

<210> 47
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 47

Gly Gly Gly Leu Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly
1   5   10   15

Pro Ser His Tyr
            20

<210> 48
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 48

Cys Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser
1 5 10 15

Glu Tyr Pro Thr Lys
20

<210> 49
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 49

Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His Tyr Met
1 5 10 15

Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly Pro Ser Glu
20 25 30

Tyr Pro Thr Lys Asn Tyr Val
35

<210> 50
<211> 61
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 50

Ala Lys Cys Thr Thr Cys Val Glu Glu Lys Asp Ser Lys Ala Arg Leu
1 5 10 15

```
Val Leu Thr Ser Gly Ile Val Phe Val Ile Ser Gly Val Leu Thr Leu
            20                  25                  30


Ile Pro Val Cys Trp Thr Ala His Ala Ile Ile Arg Asp Phe Tyr Asn
        35                  40                  45


Pro Leu Val Ala Glu Ala Gln Lys Arg Glu Leu Gly Ala
    50                  55                  60
```

<210> 51
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable heavy chain CDR

<400> 51

```
Gly Tyr Ile Phe Thr Thr Tyr Trp
1               5
```

<210> 52
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable heavy chain CDR

<400> 52

```
Ile Phe Pro Gly Asn Ser Asp Thr
1               5
```

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

<220>
<223> Variable heavy chain CDR

<400> 53

```
Thr Arg Glu Phe Tyr Ala Thr
1               5
```

<210> 54
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable light chain CDR

<400> 54

Gln Asn Leu Leu Tyr Ser Asp Gly Lys Thr Tyr
1 5 10

<210> 55
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable light chain CDR

<400> 55

Leu Met Ser
1

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

<220>
<223> Variable light chain CDR

<400> 56

Trp Gln Gly Thr His Phe Pro Trp Thr
1 5

<210> 57
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable heavy chain CDR

<400> 57

Gly Tyr Thr Phe Thr Thr Tyr Trp
1 5

<210> 58
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Variable heavy chain CDR

<400> 58

Ile Tyr Pro Glu Asn Ser Asp Ala
1 5

<210> 59
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 59

Glu Tyr Pro Thr Lys
1 5

<210> 60
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 60

Glu Tyr Pro Thr Lys Asn
1 5

<210> 61
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide

<400> 61

```
Tyr Pro Thr Lys Asn Tyr
1               5
```