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<130> 117127P877PC

<140> PCT/EP2021/087568
<141> 2021-12-23

<150> EP20216928.0
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<210> 1
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<400> 1

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

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<400> 2

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

Lys Gly

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<400> 3

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

Lys Gly

<210> 4
<211> 14
<212> PRT
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<220>
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<400> 4

Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp Arg Phe Phe Leu
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<210> 5
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<220>
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<400> 5

Gln Ser 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 Ala Asn
20 25 30

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

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

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

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

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

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

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<400> 6

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

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

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

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

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

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


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


Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
        115                 120
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<210> 7
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<400> 7

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


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


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


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


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


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


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


Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
        115                 120
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<400> 8

Gln Ser 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 Ala Asn
20 25 30

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

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

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

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

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

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

<210> 9
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<400> 9

Gln Ala Ser Gln Ser Ile Asp Ser Trp Leu Ala
1 5 10

<210> 10
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<400> 10

Gln Ala Ser Gln Ser Ile Glu Ser Trp Leu Ala
1 5 10

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<400> 11

Gln Ala Ser Lys Leu Ala Ser
1 5

<210> 12
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<400> 12

Gln Thr Tyr Tyr Gly Gly Gly His Ile Gly Trp Gly
1 5 10

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<212> PRT
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<220>

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<400> 13

Ala Phe Gln Leu 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 Asp Ser Trp
20 25 30

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

Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
85 90 95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

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<400> 14

Ala Phe Gln Leu 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 Glu Ser Trp
20 25 30

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

```
Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
                85                  90                  95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
            100                 105                 110
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<220>
<223> artificial antibody-based sequence

<400> 15

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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 Ala Asn
            20                  25                  30

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

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

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

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

Tyr Cys Ala Arg Ser Ala Trp Tyr Ser Gly Trp Gly Gly Asp Leu Trp
            100                 105                 110
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Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 16
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<212> PRT
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<400> 16

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

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

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

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

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

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

Tyr Cys Ala Arg His Pro Ser Asp Ala Val Tyr Gly Tyr Ala Asn Asn
100 105 110

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

<210> 17
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<400> 17

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 Asn Asn Val
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys 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 Ser Tyr Gly Asn Tyr Gly
85 90 95

Asp Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105

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<400> 18

Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
1 5 10

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<400> 19

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
1 5 10

<210> 20
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<400> 20

Phe Gly Gly Gly Thr Gln Leu Ile Ile Leu Gly
1 5 10

<210> 21
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<400> 21

Phe Gly Glu Gly Thr Glu Leu Thr Val Leu Gly
1 5 10

<210> 22
<211> 11
<212> PRT
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<400> 22

Phe Gly Ser Gly Thr Lys Val Thr Val Leu Gly
1 5 10

<210> 23
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<400> 23

Phe Gly Gly Gly Thr Gln Leu Thr Val Leu Gly
1 5 10

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<400> 24

Phe Gly Gly Gly Thr Gln Leu Thr Ala Leu Gly
1 5 10

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<400> 25

Phe Gly Cys Gly Thr Lys Val Thr Val Leu Gly
1 5 10

<210> 26
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<400> 26

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

Gly Gly Gly Ser
20

<210> 27
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<400> 27

Gly Gly Gly Gly Ser
1 5

<210> 28
<211> 10
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<400> 28

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

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<211> 255
<212> PRT
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<400> 29

Ala Phe Gln Leu 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 Asp Ser Trp
20 25 30

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

```
Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
                85                  90                  95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
            100                 105                 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

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

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
145                 150                 155                 160

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
                165                 170                 175

Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr Tyr
            180                 185                 190

Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
        195                 200                 205

Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
    210                 215                 220

Ala Val Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
225                 230                 235                 240

Arg Phe Phe Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
                245                 250                 255
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<400> 30

Ala Phe Gln Leu 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 Asp Ser Trp
20 25 30

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

Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
85 90 95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
100 105 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

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

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
145 150 155 160

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
165 170 175

```
Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr Tyr
            180                 185                 190


Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
        195                 200                 205


Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
    210                 215                 220


Ala Thr Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
225                 230                 235                 240


Arg Phe Phe Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
                245                 250                 255


<210>  31
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<212>  PRT
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<223>  artificial antibody-based sequence

<400>  31

Ala Phe Gln Leu 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 Asp Ser Trp
            20                  25                  30


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


Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
                85                  90                  95
```

```
Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
            100                 105                 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

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

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
145                 150                 155                 160

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
                165                 170                 175

Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr Tyr
            180                 185                 190

Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
        195                 200                 205

Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
    210                 215                 220

Ala Thr Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
225                 230                 235                 240

Arg Phe Phe Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
                245                 250                 255
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Ala Phe Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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```
1               5                   10                  15

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

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

Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
                85                  90                  95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
            100                 105                 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
        115                 120                 125

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

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
145                 150                 155                 160

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
                165                 170                 175

Leu Glu Trp Ile Val Cys Ile Ser Ile Gly Ser Arg Ala Asp Thr Tyr
            180                 185                 190

Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
        195                 200                 205

Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
    210                 215                 220
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Ala Val Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
225 230 235 240

Arg Phe Phe Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
245 250 255

<210> 33
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<400> 33

Ala Phe Gln Leu 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 Glu Ser Trp
20 25 30

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

Tyr Gln Ala Ser Lys 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 Thr Tyr Tyr Gly Gly Gly His
85 90 95

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
100 105 110

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
115 120 125

Gly Gly Ser Gln Ser Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln

130 135 140

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
145 150 155 160

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
165 170 175

Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr Tyr
180 185 190

Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
195 200 205

Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
210 215 220

Ala Val Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
225 230 235 240

Arg Phe Phe Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
245 250 255

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<400> 34

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

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

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

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

Ser Gly Ser Gly Arg 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 Ser Ser Tyr Ser Thr Gly
                85                  90                  95

Ser Asn Ile Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val
            100                 105                 110

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
        115                 120                 125

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
    130                 135                 140

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
145                 150                 155                 160

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
                165                 170                 175

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
            180                 185                 190

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
        195                 200                 205

Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
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<400> 35

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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 Ser Ser Ser Ala
            20                  25                  30

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

Ile Gly Cys Ile Tyr Ala Gly Ser Arg 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

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

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

Pro Tyr Tyr Phe Ser Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser
        115                 120                 125

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
    130                 135                 140

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
145                 150                 155                 160

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
                165                 170                 175

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
            180                 185                 190

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
        195                 200                 205
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Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
    210                 215                 220

Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
225                 230                 235                 240

Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
                245                 250                 255

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
            260                 265                 270

Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
        275                 280                 285

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
    290                 295                 300

Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
305                 310                 315                 320

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
                325                 330                 335

Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
            340                 345                 350

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
        355                 360                 365

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
    370                 375                 380

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
385                 390                 395                 400

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
                405                 410                 415

Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
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```
            420                 425                 430

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
        435                 440                 445

Ser Leu Ser Leu Ser Leu Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
    450                 455                 460

Ser Ala Phe Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
465                 470                 475                 480

Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Ser Ile Asp Ser
                485                 490                 495

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro Lys Leu Leu
            500                 505                 510

Ile Tyr Gln Ala Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
        515                 520                 525

Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln
    530                 535                 540

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Thr Tyr Tyr Gly Gly Gly
545                 550                 555                 560

His Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
                565                 570                 575

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
            580                 585                 590

Gly Gly Gly Ser Gln Ser Gln Leu Val Glu Ser Gly Gly Gly Arg Val
        595                 600                 605

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser
    610                 615                 620

Phe Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys
625                 630                 635                 640
```

```
Gly Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr
                645                 650                 655

Tyr Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn
            660                 665                 670

Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
        675                 680                 685

Thr Ala Thr Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu
    690                 695                 700

Asp Arg Phe Phe Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
705                 710                 715                 720
```

<210> 36
<211> 216
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<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 Asp Ile Glu Ser Tyr
            20                  25                  30

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

Tyr Arg Ala Ser Thr Leu Ala Tyr 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 Ser Ser Tyr Ser Thr Gly
```

85 90 95

Ser Asn Ile Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val
100 105 110

Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
115 120 125

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg
130 135 140

Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn
145 150 155 160

Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser
165 170 175

Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
180 185 190

Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr
195 200 205

Lys Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 37
<211> 719
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<400> 37

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

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

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

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

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

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

Cys Ala Arg Ala Ala Phe Val Asn Arg Gly Val Ser Trp Ile Trp Pro
            100                 105                 110

Tyr Tyr Phe Ser Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
        115                 120                 125

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
    130                 135                 140

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
145                 150                 155                 160

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
                165                 170                 175

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
            180                 185                 190

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
        195                 200                 205

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
    210                 215                 220

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro
225                 230                 235                 240

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
```

```
               245                 250                 255

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
            260                 265                 270

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
        275                 280                 285

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
    290                 295                 300

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
305                 310                 315                 320

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
                325                 330                 335

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
            340                 345                 350

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
        355                 360                 365

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
    370                 375                 380

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
385                 390                 395                 400

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
                405                 410                 415

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
            420                 425                 430

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
        435                 440                 445

Leu Ser Leu Ser Leu Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
    450                 455                 460
```

```
Ala Phe Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
465                 470                 475                 480

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Ser Ile Asp Ser Trp
                485                 490                 495

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Pro Pro Lys Leu Leu Ile
            500                 505                 510

Tyr Gln Ala Ser Lys Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly
        515                 520                 525

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro
    530                 535                 540

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Thr Tyr Tyr Gly Gly Gly His
545                 550                 555                 560

Ile Gly Trp Gly Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gly
                565                 570                 575

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
            580                 585                 590

Gly Gly Ser Gln Ser Gln Leu Val Glu Ser Gly Gly Gly Arg Val Gln
        595                 600                 605

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe
    610                 615                 620

Ser Ala Asn Tyr Trp Ile Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
625                 630                 635                 640

Leu Glu Trp Ile Val Cys Ile Tyr Ile Gly Ser Arg Ala Asp Thr Tyr
                645                 650                 655

Tyr Ala Pro Trp Ala Lys Gly Arg Phe Thr Ile Ser Lys Asp Asn Ser
            660                 665                 670
```

Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
675 680 685

Ala Thr Tyr Phe Cys Ala Arg Phe Ser Ser Gly Ile Tyr Asp Leu Asp
690 695 700

Arg Phe Phe Leu Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
705 710 715

<210> 38
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<220>
<221> Repeat
<222> (1)..(5)
<223> (GSGGS)n with n being integer of at least 1

<400> 38

Gly Ser Gly Gly Ser
1 5

<210> 39
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<220>
<221> Repeat
<222> (1)..(5)
<223> (GGGGS)n with n being integer of at least 1

<400> 39

Gly Gly Gly Gly Ser
1 5

<210> 40
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<220>
<221> Repeat
<222> (1)..(4)
<223> (GGGS)n with n being integer of at least 1

<400> 40

Gly Gly Gly Ser
1

<210> 41
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<220>
<221> Repeat
<222> (1)..(5)
<223> (GGGGS)n with n being selected from 1, 2, 3, 4 and 5

<400> 41

Gly Gly Gly Gly Ser
1 5

<210> 42
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> artificial antibody-based sequence

<220>
<221> Repeat
<222> (1)..(5)
<223> (GGGGS)n with n being selected from 1, 2, 3, 4, 5, 6, 7 and 8

<400> 42

Gly Gly Gly Gly Ser
1   5