

SEQUENCE LISTING

<110> Numab Therapeutics AG

<120> MULTISPECIFIC ANTIBODIES HAVING SPECIFICITY FOR TNFa AND IL-17A,
ANTIBODIES TARGETING IL-17A, AND METHODS OF USE THEREOF

<130> 115527P877PC

<150> EP19154852.8

<151> 2019-01-31

<150> EP19154846.0

<151> 2019-01-31

<150> EP19154850.2

<151> 2019-01-31

<160> 149

<170> PatentIn version 3.5

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Gly	Phe	Ser	Phe	Ser	Ser	Asp	Tyr	Trp	Met	Cys
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Cys	Ile	Tyr	Ala	Gly	Asp	Val	Asp	Asp	Thr	Asp	Tyr	Ala	Ser	Trp	Ala
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Arg Gly

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Arg Val Asp Gly Phe Asp Ile Thr Tyr Phe Asp Leu
1 5 10

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Ser Asp Tyr Trp Met Cys
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Cys Ile Tyr Ala Gly Asp Val Asp Asp Thr Asp Tyr Ala Ser Trp Ala
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Arg Gly

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Val Asp Gly Phe Asp Ile Thr Tyr Phe Asp Leu
1 5 10

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<400> 7

Gly Phe Ser Phe Ser Ser Asp Tyr
1 5

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Ala Gly Asp Val Asp
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Asp Gly Phe Asp Ile Thr Tyr Phe Asp
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<400> 10

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 Asp
20 25 30

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

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

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

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

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<400> 11

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

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

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

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

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

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

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Gln Ala Ser Gln Thr Ile Asn Tyr Trp Leu Ala
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Arg Ala Ser Thr Leu Ala Ser
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<400> 14

Gln Asn Tyr Tyr Tyr Ser Thr Ser Arg Ser Tyr Gly
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Gln Ala Ser Gln Thr Ile Asn Tyr Trp Leu Ala
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Arg Ala Ser Thr Leu Ala Ser
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Gln Asn Tyr Tyr Tyr Ser Thr Ser Arg Ser Tyr Gly
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<400> 18

Ser Gln Thr Ile Asn Tyr Trp
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Arg Ala Ser
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Tyr Tyr Tyr Ser Thr Ser Arg Ser Tyr
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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 Thr Ile Asn Tyr Trp
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 Asn Tyr Tyr Tyr Ser Thr Ser
85 90 95

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

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<400> 22

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 Thr Ile Asn Tyr Trp
20 25 30

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

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

<210> 23
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<400> 23

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

Gly Gly Gly Ser
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<400> 24

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 Thr Ile Asn Tyr Trp
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 Asn Tyr Tyr Tyr Ser Thr Ser
85 90 95

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu 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 Glu Val 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 Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
165 170 175

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

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

Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
245 250

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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 Thr Ile Asn Tyr Trp
20 25 30

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

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu 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 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys
130 135 140

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

Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly
165 170 175

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

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

Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
245 250

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<400> 26

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

<210> 27
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<213> Homo sapiens

<400> 27

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

<210> 28
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<213> Homo sapiens

<400> 28

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

<210> 29
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<400> 29

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

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

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<400> 31

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

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<400> 32

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

<210> 33
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<213> Homo sapiens

<400> 33

Met Thr Pro Gly Lys Thr Ser Leu Val Ser Leu Leu Leu Leu Leu Ser
1 5 10 15

Leu Glu Ala Ile Val Lys Ala Gly Ile Ala Ile Pro Gln Asn Pro Gly
20 25 30

Cys Pro Asn Ser Glu Asp Lys Asn Phe Pro Arg Thr Val Met Val Asn
35 40 45

Leu Asn Ile His Asn Arg Asn Thr Asn Thr Asn Pro Lys Arg Ser Ser
50 55 60

Asp Tyr Tyr Asn Arg Ser Thr Ser Pro Trp Asn Leu His Arg Asn Glu
65 70 75 80

Asp Pro Glu Arg Tyr Pro Ser Val Ile Trp Glu Ala Lys Cys Arg His
85 90 95

Leu Gly Cys Val Asn Ala Asp Gly Lys Val Asp Tyr His Met Asn Ser
100 105 110

Val Pro Ile Gln Gln Glu Ile Leu Val Leu Arg Arg Glu Pro Pro His
115 120 125

Cys Pro Asn Ser Phe Arg Leu Glu Lys Ile Leu Val Ser Val Gly Cys
130 135 140

Thr Cys Val Thr Pro Ile Val His His Val Ser
145 150 155

<210> 34
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<213> Homo sapiens

<400> 34

Met Asp Trp Pro His Asn Leu Leu Phe Leu Leu Thr Ile Ser Ile Phe
1 5 10 15

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

Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val Pro Leu Asp
35 40 45

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

Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn Ser Ser Glu Leu Ala
65 70 75 80

Gln Arg Lys Cys Glu Val Asn Leu Gln Leu Trp Met Ser Asn Lys Arg
85 90 95

Ser Leu Ser Pro Trp Gly Tyr Ser Ile Asn His Asp Pro Ser Arg Ile
100 105 110

Pro Val Asp Leu Pro Glu Ala Arg Cys Leu Cys Leu Gly Cys Val Asn
115 120 125

Pro Phe Thr Met Gln Glu Asp Arg Ser Met Val Ser Val Pro Val Phe
130 135 140

Ser Gln Val Pro Val Arg Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr
145 150 155 160

Gly Pro Cys Arg Gln Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys
165 170 175

Thr Cys Ile Phe
180

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<213> Homo sapiens

<400> 35

Met Thr Leu Leu Pro Gly Leu Leu Phe Leu Thr Trp Leu His Thr Cys
1 5 10 15

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

Thr Pro His Cys Tyr Ser Ala Glu Glu Leu Pro Leu Gly Gln Ala Pro
35 40 45

Pro His Leu Leu Ala Arg Gly Ala Lys Trp Gly Gln Ala Leu Pro Val
50 55 60

Ala Leu Val Ser Ser Leu Glu Ala Ala Ser His Arg Gly Arg His Glu
65 70 75 80

Arg Pro Ser Ala Thr Thr Gln Cys Pro Val Leu Arg Pro Glu Glu Val
85 90 95

Leu Glu Ala Asp Thr His Gln Arg Ser Ile Ser Pro Trp Arg Tyr Arg
100 105 110

Val Asp Thr Asp Glu Asp Arg Tyr Pro Gln Lys Leu Ala Phe Ala Glu
115 120 125

Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu Thr Ala
130 135 140

Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu Arg Arg
145 150 155 160

Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly Ala Phe
165 170 175

Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr Cys Val
180 185 190

Leu Pro Arg Ser Val
195

<210> 36
<211> 202
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<213> Homo sapiens

<400> 36

Met Leu Val Ala Gly Phe Leu Leu Ala Leu Pro Pro Ser Trp Ala Ala
1 5 10 15

Gly Ala Pro Arg Ala Gly Arg Arg Pro Ala Arg Pro Arg Gly Cys Ala
20 25 30

Asp Arg Pro Glu Glu Leu Leu Glu Gln Leu Tyr Gly Arg Leu Ala Ala
35 40 45

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

Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp Arg
65 70 75 80

Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr
85 90 95

Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu Ala
100 105 110

Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu Asp
115 120 125

Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val Val Leu Arg
130 135 140

Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr Glu Ala Tyr
145 150 155 160

Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys Asp
165 170 175

Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala Lys Leu Leu
180 185 190

Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro
195 200

<210> 37
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<400> 37

Met Arg Glu Arg Pro Arg Leu Gly Glu Asp Ser Ser Leu Ile Ser Leu
1 5 10 15

Phe Leu Gln Val Val Ala Phe Leu Ala Met Val Met Gly Thr His Thr
20 25 30

Tyr Ser His Trp Pro Ser Cys Cys Pro Ser Lys Gly Gln Asp Thr Ser
35 40 45

Glu Glu Leu Leu Arg Trp Ser Thr Val Pro Val Pro Pro Leu Glu Pro
50 55 60

Ala Arg Pro Asn Arg His Pro Glu Ser Cys Arg Ala Ser Glu Asp Gly
65 70 75 80

Pro Leu Asn Ser Arg Ala Ile Ser Pro Trp Arg Tyr Glu Leu Asp Arg
85 90 95

Asp Leu Asn Arg Leu Pro Gln Asp Leu Tyr His Ala Arg Cys Leu Cys
100 105 110

Pro His Cys Val Ser Leu Gln Thr Gly Ser His Met Asp Pro Arg Gly
115 120 125

Asn Ser Glu Leu Leu Tyr His Asn Gln Thr Val Phe Tyr Arg Arg Pro
130 135 140

Cys His Gly Glu Lys Gly Thr His Lys Gly Tyr Cys Leu Glu Arg Arg
145 150 155 160

Leu Tyr Arg Val Ser Leu Ala Cys Val Cys Val Arg Pro Arg Val Met
165 170 175

Gly

<210> 38
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<213> Homo sapiens

<400> 38

Met Thr Val Lys Thr Leu His Gly Pro Ala Met Val Lys Tyr Leu Leu
1 5 10 15

Leu Ser Ile Leu Gly Leu Ala Phe Leu Ser Glu Ala Ala Ala Arg Lys
20 25 30

Ile Pro Lys Val Gly His Thr Phe Phe Gln Lys Pro Glu Ser Cys Pro
35 40 45

Pro Val Pro Gly Gly Ser Met Lys Leu Asp Ile Gly Ile Ile Asn Glu
50 55 60

Asn Gln Arg Val Ser Met Ser Arg Asn Ile Glu Ser Arg Ser Thr Ser
65 70 75 80

Pro Trp Asn Tyr Thr Val Thr Trp Asp Pro Asn Arg Tyr Pro Ser Glu
85 90 95

Val Val Gln Ala Gln Cys Arg Asn Leu Gly Cys Ile Asn Ala Gln Gly
100 105 110

Lys Glu Asp Ile Ser Met Asn Ser Val Pro Ile Gln Gln Glu Thr Leu
115 120 125

Val Val Arg Arg Lys His Gln Gly Cys Ser Val Ser Phe Gln Leu Glu

130

135

140

Lys Val Leu Val Thr Val Gly Cys Thr Cys Val Thr Pro Val Ile His
145 150 155 160

His Val Gln

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<400> 39

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

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<400> 40

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

Gly

<210> 41
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<400> 41

Arg Asp Ala Ala Tyr Gly Gly Tyr Ala Tyr Pro Ala His Gly Met Asp
1 5 10 15

Leu

<210> 42

<211> 6

<212> PRT

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<400> 42

Gly Phe Tyr Tyr Met Cys
1 5

<210> 43

<211> 17

<212> PRT

<213> Artificial Sequence

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<223> artificial antibody-related sequence

<400> 43

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

Gly

<210> 44

<211> 16

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<400> 44

Asp Ala Ala Tyr Gly Gly Tyr Ala Tyr Pro Ala His Gly Met Asp Leu
1 5 10 15

<210> 45

<211> 8

<212> PRT

<213> Artificial Sequence

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<223> artificial antibody-related sequence

<400> 45

Gly Phe Ser Phe Ser Gly Phe Tyr
1 5

<210> 46

<211> 4

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<400> 46

Thr Gly Asp Gly
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<400> 47

Ala Ala Tyr Gly Gly Tyr Ala Tyr Pro Ala His Gly Met Asp
1 5 10

<210> 48

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<400> 48

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 Gly Phe
20 25 30

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

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

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

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

Cys Ala Arg Asp Ala Ala Tyr Gly Gly Tyr Ala Tyr Pro Ala His Gly
100 105 110

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

<210> 49
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<400> 49

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

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

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

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

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

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

Cys Ala Arg Asp Ala Ala Tyr Gly Gly Tyr Ala Tyr Pro Ala His Gly
100 105 110

Met Asp Leu Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 50
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<400> 50

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

<210> 51
<211> 7
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<400> 51

Leu Ala Ser Thr Leu Thr Ser
1 5

<210> 52

<211> 14

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<400> 52

Gln Ser Asn Phe Gly Thr Ala Ser Thr Thr Tyr Tyr Asn Thr
1 5 10

<210> 53

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<400> 53

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

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<400> 54

Leu Ala Ser Thr Leu Thr Ser

1 5

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<400> 55

Gln Ser Asn Phe Gly Thr Ala Ser Thr Thr Tyr Tyr Asn Thr
1 5 10

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<400> 56

Ser Glu Ser Ile Tyr Arg Tyr
1 5

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Leu Ala Ser
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<400> 58

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

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<400> 59

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 Arg Tyr
20 25 30

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

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

Thr Thr Tyr Tyr Asn Thr Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

Gly

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<400> 60

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 Arg Tyr
20 25 30

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

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

Thr Thr Tyr Tyr Asn Thr Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

Gly

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<220>
<223> artificial antibody-related sequence

<400> 61

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 Arg Tyr
20 25 30

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

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

Thr Thr Tyr Tyr Asn Thr Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

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

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

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

Ser Phe Ser Gly Phe Tyr Tyr Met Cys Trp Val Arg Gln Ala Pro Gly
165 170 175

Lys Gly Leu Glu Trp Ile Gly Cys Ile Asp Thr Gly Asp Gly Thr Thr
180 185 190

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

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

Thr Ala Val Tyr Tyr Cys Ala Arg Asp Ala Ala Tyr Gly Gly Tyr Ala
225 230 235 240

Tyr Pro Ala His Gly Met Asp Leu Trp Gly Gln Gly Thr Leu Val Thr
245 250 255

Val Ser Ser

<210> 62
<211> 259
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 62

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 Arg Tyr
20 25 30

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

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

Thr Thr Tyr Tyr Asn Thr Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

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

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

Val Gln Pro Gly Gly Ser Leu Thr Leu Ser Cys Ala Ala Ser Gly Phe
145 150 155 160

Ser Phe Ser Gly Phe Tyr Tyr Met Cys Trp Val Arg Gln Ala Pro Gly
165 170 175

Lys Gly Leu Glu Trp Ile Gly Cys Ile Asp Thr Gly Asp Gly Thr Thr
180 185 190

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

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

Thr Ala Val Tyr Tyr Cys Ala Arg Asp Ala Ala Tyr Gly Gly Tyr Ala
225 230 235 240

Tyr Pro Ala His Gly Met Asp Leu Trp Gly Pro Gly Thr Leu Val Thr
245 250 255

Val Ser Ser

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

<220>
<223> artificial antibody-related sequence

<400> 63

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

<210> 64
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 64

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

Gly

<210> 65
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 65

Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn
1 5 10 15

Leu

<210> 66

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

<220>
<223> artificial antibody-related sequence

<400> 66

Thr Tyr Gly Ile Ser
1 5

<210> 67
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 67

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

Gly

<210> 68
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 68

Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn Leu
1 5 10 15

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

<220>
<223> artificial antibody-related sequence

<400> 69

Gly Ile Asp Phe Ser Thr Tyr
1 5

<210> 70
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 70

Pro Asp Tyr Gly
1

<210> 71
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 71

Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn
1 5 10

<210> 72
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 72

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 Ile Asp Phe Ser Thr Tyr
20 25 30

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

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

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

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

Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe
100 105 110

Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 73
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 73

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 Ile Asp Phe Ser Thr Tyr
20 25 30

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

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

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

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

Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe
100 105 110

Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 74
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 74

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 Lys Ala Ser Gly Ile Asp Phe Ser Thr Tyr
20 25 30

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

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

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

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

Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe
100 105 110

Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 75
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 75

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 Ile Asp Phe Ser Thr Tyr
20 25 30

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

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

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

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

Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe
100 105 110

Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 76
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 76

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

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

<220>
<223> artificial antibody-related sequence

<400> 77

Lys Ala Ser Thr Leu Ala Ser
1 5

<210> 78
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 78

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

<210> 79
<211> 11
<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 79

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

<210> 80

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 80

Lys Ala Ser Thr Leu Ala Ser
1 5

<210> 81

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 81

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

<210> 82

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 82

Ser Glu Ser Ile Ser Ser Trp

1 5

<210> 83
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 83

Lys Ala Ser
1

<210> 84
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 84

Tyr Tyr Leu Asp Ser Ser Val Asp Asp Asn
1 5 10

<210> 85
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 85

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Arg Pro Lys Leu Leu Ile

35

40

45

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

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105 110

<210> 86

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 86

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 Ser Ser Trp
 20 25 30

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

Tyr Lys 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 Gly Tyr Tyr Leu Asp Ser Ser

85

90

95

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105 110

<210> 87

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 87

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
 20 25 30

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

Tyr Lys 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 Gly Leu Gln Pro
 65 70 75 80

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

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105 110

<210> 88

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 88

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

Tyr Lys Ala Ser Thr 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 Gly Leu Gln Pro
65 70 75 80

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

<210> 89

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 89

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

<210> 90
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 90

Gly Phe Ser Leu Ser Ser Asn Ala Met Gly
1 5 10

<210> 91
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 91

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

<210> 92

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

<220>
<223> artificial antibody-related sequence

<400> 92

Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu
1 5 10

<210> 93
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
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<400> 93

Ser Asn Ala Met Gly
1 5

<210> 94
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 94

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

<210> 95
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 95

Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu
1 5 10

<210> 96
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 96

Gly Phe Ser Leu Ser Ser Asn
1 5

<210> 97
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 97

Val Gly Gly
1

<210> 98
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 98

Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr
1 5 10

<210> 99
<211> 121
<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 99

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 Leu Ser Ser Asn
20 25 30

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

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

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 100

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 100

Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser

1 5 10

<210> 101
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 101

Asp Ala Ser Asp Leu Ala Ser
1 5

<210> 102
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 102

Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr Ala
1 5 10

<210> 103
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 103

Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser
1 5 10

<210> 104
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 104

Asp Ala Ser Asp Leu Ala Ser
1 5

<210> 105
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 105

Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr Ala
1 5 10

<210> 106
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 106

Ser Glu Ser Val Tyr Ser Asn Asn Gln
1 5

<210> 107
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 107

Asp Ala Ser
1

<210> 108
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 108

Gly Phe Ser Ser Ser Ser Asp Thr
1 5

<210> 109
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 109

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 Ser Ser Glu Ser Val Tyr Ser Asn
20 25 30

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

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

Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly

100

105

110

<210> 110

<211> 253

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 110

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 Ser Ser Glu Ser Val Tyr Ser Asn
 20 25 30

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

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

Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
 100 105 110

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

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

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser

145 150 155 160

Leu Ser Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly
 165 170 175

Leu Glu Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala
 180 185 190

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

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

Tyr Phe Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe
225 230 235 240

Tyr Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 245 250

<210> 111
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 111

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

<210> 112
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 112

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

Gly

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

<220>
<223> artificial antibody-related sequence

<400> 113

Arg Pro Val Ser Val Tyr Tyr Tyr Gly Met Asp Leu
1 5 10

<210> 114
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 114

Ser Ser Tyr Trp Ile Cys
1 5

<210> 115
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 115

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

Gly

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

<220>
<223> artificial antibody-related sequence

<400> 116

Pro Val Ser Val Tyr Tyr Tyr Gly Met Asp Leu
1 5 10

<210> 117
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 117

Gly Phe Ser Phe Ser Ser Ser Tyr
1 5

<210> 118
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 118

Thr Gly Asp Gly
1

<210> 119
<211> 9
<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 119

Val Ser Val Tyr Tyr Tyr Gly Met Asp
1 5

<210> 120

<211> 121

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 120

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

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

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

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

Cys Ala Arg Pro Val Ser Val Tyr Tyr Tyr Gly Met Asp Leu Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser

115

120

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

<220>
<223> artificial antibody-related sequence

<400> 121

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

<210> 122
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 122

Gln Ala Ser Lys Leu Ala Ser
1 5

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

<220>
<223> artificial antibody-related sequence

<400> 123

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

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

<220>
<223> artificial antibody-related sequence

<400> 124

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

<210> 125
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 125

Gln Ala Ser Lys Leu Ala Ser
1 5

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

<220>
<223> artificial antibody-related sequence

<400> 126

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

<210> 127
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 127

Ser Gln Ile Ile Ser Ser Arg
1 5

<210> 128
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 128

Gln Ala Ser
1

<210> 129
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 129

Thr Tyr Ile Asp Ser Asn Phe Gly
1 5

<210> 130
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 130

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 Ile Ile Ser Ser Arg
20 25 30

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

Phe Gly Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

<210> 131
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 131

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 Ile Ile Ser Ser Arg
20 25 30

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

Phe Gly Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly
100 105 110

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

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

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

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

Glu Trp Val Gly Cys Val Phe Thr Gly Asp Gly Thr Thr Tyr Tyr Ala
180 185 190

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

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

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

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
245 250

<210> 132

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 132

Gly Gly Gly Gly Ser
1 5

<210> 133
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<220>
<221> Repeat
<222> (1)..(1)
<223> generic linker sequence (GmS)_n [GlyXaaSerXaa in the Sequence Listing], with m being selected from 2, 3 and 4

<220>
<221> Repeat
<222> (1)..(3)
<223> generic linker sequence (GmS)_n [GlyXaaSerXaa in the Sequence Listing], with n being selected from 2, 3, 4, 5 and 6

<220>
<221> misc_feature
<222> (2)..(2)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (4)..(4)
<223> Xaa can be any naturally occurring amino acid

<400> 133

Gly Xaa Ser Xaa
1

<210> 134
<211> 233
<212> PRT
<213> Homo sapiens

<400> 134

Met Ser Thr Glu Ser Met Ile Arg Asp Val Glu Leu Ala Glu Glu Ala

1	5	10	15
Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe	20	25	30
Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe	35	40	45
Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro	50	55	60
Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser	65	70	75
Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro	85	90	95
Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu	100	105	110
Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser	115	120	125
Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly	130	135	140
Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala	145	150	155
Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro	165	170	175
Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu	180	185	190
Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu	195	200	205

Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
210 215 220

Gln Val Tyr Phe Gly Ile Ile Ala Leu
225 230

<210> 135
<211> 157
<212> PRT
<213> Homo sapiens

<400> 135

Val Arg Ser Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val
1 5 10 15

Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg
20 25 30

Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu
35 40 45

Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe
50 55 60

Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile
65 70 75 80

Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala
85 90 95

Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys
100 105 110

Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys
115 120 125

Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe
130 135 140

Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu
145 150 155

<210> 136
<211> 488
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 136

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 Ser Ser Glu Ser Val Tyr Ser Asn
20 25 30

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

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

Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

Arg Thr Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser
115 120 125

Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn
130 135 140

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

Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys
165 170 175

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

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

Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly Gly
210 215 220

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser
225 230 235 240

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Asn Cys Gln Ala
245 250 255

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

Lys Arg Pro Lys Leu Leu Ile Tyr Lys Ala Ser Thr Leu Ala Ser Gly
275 280 285

Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu
290 295 300

Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
305 310 315 320

Gly Tyr Tyr Leu Asp Ser Ser Val Asp Asp Asn Val Phe Gly Gly Gly
325 330 335

Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
340 345 350

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val
355 360 365

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
370 375 380

Cys Ala Ala Ser Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val
385 390 395 400

Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro
405 410 415

Asp Tyr Gly Ile Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr
420 425 430

Ile Ser Leu Asp Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser
435 440 445

Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser
450 455 460

Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln
465 470 475 480

Gly Thr Leu Val Thr Val Ser Ser
485

<210> 137

<211> 487

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 137

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 Leu Ser Ser Asn
20 25 30

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

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

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

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

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

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

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

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
180 185 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
195 200 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
210 215 220

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
225 230 235 240

Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr
245 250 255

Cys Gln Ala Ser Gln Thr Ile Asn Tyr Trp Leu Ala Trp Tyr Gln Gln
260 265 270

Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg Ala Ser Thr Leu
275 280 285

Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
290 295 300

Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
305 310 315 320

Tyr Cys Gln Asn Tyr Tyr Tyr Ser Thr Ser Arg Ser Tyr Gly Phe Gly
325 330 335

Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Gly Gly
340 345 350

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln
355 360 365

Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg
370 375 380

Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Asp Tyr Trp Met
385 390 395 400

Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Cys
405 410 415

Ile Tyr Ala Gly Asp Val Asp Asp Thr Asp Tyr Ala Ser Trp Ala Arg
420 425 430

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu
435 440 445

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
450 455 460

Arg Val Asp Gly Phe Asp Ile Thr Tyr Phe Asp Leu Trp Gly Gln Gly
465 470 475 480

Thr Leu Val Thr Val Ser Ser
485

<210> 138

<211> 487

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 138

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 Thr Ile Asn Tyr Trp
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 Asn Tyr Tyr Tyr Ser Thr Ser
85 90 95

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Arg
100 105 110

Thr Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp
115 120 125

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn
130 135 140

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

Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp
165 170 175

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

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

Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly Gly Gly
210 215 220

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
225 230 235 240

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Asn Cys Gln Ala Ser
245 250 255

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

Arg Pro Lys Leu Leu Ile Tyr Lys Ala Ser Thr Leu Ala Ser Gly Val
275 280 285

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr
290 295 300

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gly
305 310 315 320

Tyr Tyr Leu Asp Ser Ser Val Asp Asp Asn Val Phe Gly Gly Gly Thr
325 330 335

Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
340 345 350

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
355 360 365

Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
370 375 380

Ala Ala Ser Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg
385 390 395 400

Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp
405 410 415

Tyr Gly Ile Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile
420 425 430

Ser Leu Asp Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
435 440 445

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr
450 455 460

Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly
465 470 475 480

Thr Leu Val Thr Val Ser Ser
485

<210> 139

<211> 488

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 139

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 Asp
20 25 30

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

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

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

Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
115 120 125

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

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

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

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
180 185 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
195 200 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
210 215 220

Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr
225 230 235 240

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile
245 250 255

Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser Trp
260 265 270

Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Asp Ala
275 280 285

Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
290 295 300

Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe
305 310 315 320

Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr Ala
325 330 335

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser
340 345 350

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
355 360 365

Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
370 375 380

Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser Ser Asn Ala
385 390 395 400

Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Ile Gly
405 410 415

Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
420 425 430

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln
435 440 445

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg
450 455 460

Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu Trp Gly Gln
465 470 475 480

Gly Thr Leu Val Thr Val Ser Ser
485

<210> 140

<211> 484

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 140

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

Arg Thr Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser
115 120 125

Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn
130 135 140

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

Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys
165 170 175

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

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

Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys Gly Gly Gly
210 215 220

Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser
225 230 235 240

Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ser
245 250 255

Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser Trp Tyr Gln Gln Lys
260 265 270

Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Asp Ala Ser Asp Leu Ala
275 280 285

Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
290 295 300

Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
305 310 315 320

Cys Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr Ala Phe Gly Gly Gly
325 330 335

Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly
340 345 350

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val
355 360 365

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
370 375 380

Cys Ala Ala Ser Gly Phe Ser Leu Ser Ser Asn Ala Met Gly Trp Val
385 390 395 400

Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Ile Gly Ile Ile Ser Val
405 410 415

Gly Gly Phe Thr Tyr Tyr Ala Ser Trp Ala Lys Gly Arg Phe Thr Ile
420 425 430

Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
435 440 445

Arg Ala Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Asp Arg His Gly
450 455 460

Gly Asp Ser Ser Gly Ala Phe Tyr Leu Trp Gly Gln Gly Thr Leu Val
465 470 475 480

Thr Val Ser Ser

<210> 141
<211> 491
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 141

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 Ile Asp Phe Ser Thr Tyr
20 25 30

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

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

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

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

Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe
100 105 110

Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr
115 120 125

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

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

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

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

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
195 200 205

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
210 215 220

Pro Lys Ser Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
225 230 235 240

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
245 250 255

Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile Asn Tyr Trp Leu Ala
260 265 270

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg
275 280 285

Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
290 295 300

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
305 310 315 320

Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr Ser Thr Ser Arg Ser
325 330 335

Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly
340 345 350

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
355 360 365

Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
370 375 380

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser
385 390 395 400

Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
405 410 415

Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp Thr Asp Tyr Ala
420 425 430

Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
435 440 445

Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
450 455 460

Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr Tyr Phe Asp Leu
465 470 475 480

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
485 490

<210> 142
<211> 763
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 142

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 Thr Ile Asn Tyr Trp
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 Asn Tyr Tyr Tyr Ser Thr Ser
85 90 95

Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly
100 105 110

Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val
115 120 125

Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser
130 135 140

Leu Ser Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly
145 150 155 160

Leu Glu Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala
165 170 175

Ser Trp Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
180 185 190

Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr
195 200 205

Tyr Phe Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe
210 215 220

Tyr Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
245 250 255

Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
260 265 270

Gly Asp Arg Val Thr Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser
275 280 285

Asn Asn Gln Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys
290 295 300

Leu Leu Ile Tyr Asp Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg
305 310 315 320

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
325 330 335

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser
340 345 350

Ser Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
355 360 365

Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly
370 375 380

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
385 390 395 400

Phe Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro
405 410 415

Gly Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp
420 425 430

Asp Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg
435 440 445

Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala
450 455 460

Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile
465 470 475 480

Thr Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
485 490 495

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln
500 505 510

Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Asn
515 520 525

Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln
530 535 540

Lys Pro Gly Lys Arg Pro Lys Leu Leu Ile Tyr Lys Ala Ser Thr Leu
545 550 555 560

Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
565 570 575

Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr
580 585 590

Tyr Cys Gln Gly Tyr Tyr Leu Asp Ser Ser Val Asp Asp Asn Val Phe
595 600 605

Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Gly
610 615 620

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val
625 630 635 640

Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu
645 650 655

Arg Leu Ser Cys Ala Ala Ser Gly Ile Asp Phe Ser Thr Tyr Gly Ile
660 665 670

Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Ala Tyr
675 680 685

Ile Tyr Pro Asp Tyr Gly Ile Thr Asp Tyr Ala Ser Trp Val Asn Gly
690 695 700

Arg Phe Thr Ile Ser Leu Asp Asn Ala Gln Asn Thr Val Tyr Leu Gln
705 710 715 720

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
725 730 735

Ser Gly Ser Tyr Tyr Ser Arg Gly Trp Gly Ala His Tyr Phe Asn Leu
740 745 750

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 143
<211> 763
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 143

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly
145 150 155 160

Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp
165 170 175

Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp
180 185 190

Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
195 200 205

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr
210 215 220

Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
225 230 235 240

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
260 265 270

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile
275 280 285

Asn Tyr Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
290 295 300

Leu Leu Ile Tyr Arg Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg
305 310 315 320

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
325 330 335

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr
340 345 350

Ser Thr Ser Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val
355 360 365

Leu Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
370 375 380

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
385 390 395 400

Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro
405 410 415

Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile
420 425 430

Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp
435 440 445

Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
450 455 460

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg
465 470 475 480

Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val
485 490 495

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
500 505 510

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
515 520 525

Val Thr Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln
530 535 540

Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
545 550 555 560

Tyr Asp Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly
565 570 575

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
580 585 590

Glu Asp Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser
595 600 605

Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly
610 615 620

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
625 630 635 640

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro
645 650 655

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser
660 665 670

Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
675 680 685

Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp
690 695 700

Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val
705 710 715 720

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe
725 730 735

Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu
740 745 750

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 144

<211> 763

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 144

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 Ser Ser Glu Ser Val Tyr Ser Asn
20 25 30

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

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

Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ile
130 135 140

Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Lys
145 150 155 160

Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile Thr Asp
165 170 175

Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp Asn Ala
180 185 190

Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr
195 200 205

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly Trp
210 215 220

Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val Thr Val
225 230 235 240

Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
260 265 270

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Asn Cys Gln Ala Ser
275 280 285

Glu Ser Ile Ser Ser Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
290 295 300

Arg Pro Lys Leu Leu Ile Tyr Lys Ala Ser Thr Leu Ala Ser Gly Val
305 310 315 320

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr
325 330 335

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gly
340 345 350

Tyr Tyr Leu Asp Ser Ser Val Asp Asp Asn Val Phe Gly Gly Gly Thr
355 360 365

Lys Leu Thr Val Leu Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val
370 375 380

Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser
385 390 395 400

Cys Ala Ala Ser Gly Phe Ser Leu Ser Ser Asn Ala Met Gly Trp Val
405 410 415

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

Gly Gly Phe Thr Tyr Tyr Ala Ser Trp Ala Lys Gly Arg Phe Thr Ile
435 440 445

Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu
450 455 460

Arg Ala Glu Asp Thr Ala Thr Tyr Phe Cys Ala Arg Asp Arg His Gly
465 470 475 480

Gly Asp Ser Ser Gly Ala Phe Tyr Leu Trp Gly Gln Gly Thr Leu Val
485 490 495

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
500 505 510

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
515 520 525

Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile Asn Tyr Trp Leu Ala
530 535 540

Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Arg
545 550 555 560

Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
565 570 575

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
580 585 590

Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr Ser Thr Ser Arg Ser
595 600 605

Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly
610 615 620

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
625 630 635 640

Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
645 650 655

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser
660 665 670

Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
675 680 685

Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp Thr Asp Tyr Ala
690 695 700

Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
705 710 715 720

Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
725 730 735

Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr Tyr Phe Asp Leu
740 745 750

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 145

<211> 763

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 145

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

Tyr Lys Ala Ser Thr 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 Gly Leu Gln Pro
65 70 75 80

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly
145 150 155 160

Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp
165 170 175

Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp
180 185 190

Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
195 200 205

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr
210 215 220

Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
225 230 235 240

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
260 265 270

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile
275 280 285

Asn Tyr Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
290 295 300

Leu Leu Ile Tyr Arg Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg
305 310 315 320

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
325 330 335

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr
340 345 350

Ser Thr Ser Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val
355 360 365

Leu Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
370 375 380

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
385 390 395 400

Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro
405 410 415

Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile
420 425 430

Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp
435 440 445

Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
450 455 460

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg
465 470 475 480

Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val
485 490 495

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
500 505 510

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
515 520 525

Val Thr Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln
530 535 540

Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
545 550 555 560

Tyr Asp Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly
565 570 575

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
580 585 590

Glu Asp Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser
595 600 605

Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly
610 615 620

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
625 630 635 640

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro
645 650 655

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser
660 665 670

Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
675 680 685

Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp
690 695 700

Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val
705 710 715 720

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe
725 730 735

Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu
740 745 750

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 146

<211> 763

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 146

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly
145 150 155 160

Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp
165 170 175

Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp
180 185 190

Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
195 200 205

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr
210 215 220

Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
225 230 235 240

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
260 265 270

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile
275 280 285

Asn Tyr Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
290 295 300

Leu Leu Ile Tyr Arg Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg
305 310 315 320

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
325 330 335

Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr
340 345 350

Ser Thr Ser Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val
355 360 365

Leu Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
370 375 380

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
385 390 395 400

Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro
405 410 415

Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile
420 425 430

Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp
435 440 445

Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
450 455 460

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg
465 470 475 480

Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val
485 490 495

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile
500 505 510

Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
515 520 525

Val Thr Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln
530 535 540

Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
545 550 555 560

Tyr Asp Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly
565 570 575

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
580 585 590

Glu Asp Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser
595 600 605

Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly
610 615 620

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
625 630 635 640

Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro
645 650 655

Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser
660 665 670

Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
675 680 685

Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp
690 695 700

Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val
705 710 715 720

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe
725 730 735

Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu
740 745 750

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 147
<211> 761
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial antibody-related sequence

<400> 147

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

Tyr Lys Ala Ser Thr 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 Gly Leu Gln Pro
65 70 75 80

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly
145 150 155 160

Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp
165 170 175

Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp
180 185 190

Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
195 200 205

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr
210 215 220

Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
225 230 235 240

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
260 265 270

Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile Asn
275 280 285

Tyr Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu
290 295 300

Leu Ile Tyr Arg Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg Phe
305 310 315 320

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
325 330 335

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr Ser
340 345 350

Thr Ser Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
355 360 365

Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly
370 375 380

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
385 390 395 400

Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro Gly
405 410 415

Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile Thr
420 425 430

Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp Asn
435 440 445

Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
450 455 460

Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly
465 470 475 480

Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val Thr
485 490 495

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ile Gln Met
500 505 510

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
515 520 525

Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser
530 535 540

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Asp
545 550 555 560

Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
565 570 575

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
580 585 590

Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr
595 600 605

Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly
610 615 620

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
625 630 635 640

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
645 650 655

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser Ser Asn
660 665 670

Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Ile
675 680 685

Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp Ala Lys
690 695 700

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

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe Cys Ala
725 730 735

Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu Trp Gly
740 745 750

Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

<210> 148

<211> 761

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 148

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 Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Phe Ser Ser Asp Tyr Trp Met Cys Trp Val Arg Gln Ala Pro Gly
145 150 155 160

Lys Gly Leu Glu Trp Ile Gly Cys Ile Tyr Ala Gly Asp Val Asp Asp
165 170 175

Thr Asp Tyr Ala Ser Trp Ala Arg Gly Arg Phe Thr Ile Ser Arg Asp
180 185 190

Asn Ser Lys Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
195 200 205

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Asp Gly Phe Asp Ile Thr
210 215 220

Tyr Phe Asp Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly
225 230 235 240

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
245 250 255

Gly Gly Ser Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
260 265 270

Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Thr Ile Asn
275 280 285

Tyr Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu
290 295 300

Leu Ile Tyr Arg Ala Ser Thr Leu Ala Ser Gly Val Pro Ser Arg Phe
305 310 315 320

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
325 330 335

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Asn Tyr Tyr Tyr Ser
340 345 350

Thr Ser Arg Ser Tyr Gly Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
355 360 365

Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly
370 375 380

Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
385 390 395 400

Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro Gly
405 410 415

Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile Thr
420 425 430

Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp Asn
435 440 445

Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
450 455 460

Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg Gly
465 470 475 480

Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val Thr
485 490 495

Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ile Gln Met
500 505 510

Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
515 520 525

Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr Ser Asn Asn Gln Leu Ser
530 535 540

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Asp
545 550 555 560

Ala Ser Asp Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
565 570 575

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
580 585 590

Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe Ser Ser Ser Ser Asp Thr
595 600 605

Ala Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Gly
610 615 620

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
625 630 635 640

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
645 650 655

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu Ser Ser Asn
660 665 670

Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Tyr Ile
675 680 685

Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr Ala Ser Trp Ala Lys
690 695 700

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

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Thr Tyr Phe Cys Ala
725 730 735

Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala Phe Tyr Leu Trp Gly
740 745 750

Gln Gly Thr Leu Val Thr Val Ser Ser
755 760

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<211> 500

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial antibody-related sequence

<400> 149

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Asn Cys Gln Ala Ser Glu Ser Ile Ser Ser Trp
20 25 30

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

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

Val Asp Asp Asn Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu
115 120 125

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

Ser Leu Ser Ser Asn Ala Met Gly Trp Val Arg Gln Ala Pro Gly Lys
145 150 155 160

Gly Leu Glu Tyr Ile Gly Ile Ile Ser Val Gly Gly Phe Thr Tyr Tyr
165 170 175

Ala Ser Trp Ala Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys
180 185 190

Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala
195 200 205

Thr Tyr Phe Cys Ala Arg Asp Arg His Gly Gly Asp Ser Ser Gly Ala
210 215 220

Phe Tyr Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly
225 230 235 240

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
245 250 255

Gly Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser
260 265 270

Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ser Ser Glu Ser Val Tyr
275 280 285

Ser Asn Asn Gln Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
290 295 300

Lys Leu Leu Ile Tyr Asp Ala Ser Asp Leu Ala Ser Gly Val Pro Ser
305 310 315 320

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
325 330 335

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Ala Gly Gly Phe
340 345 350

Ser Ser Ser Ser Asp Thr Ala Phe Gly Gly Gly Thr Lys Leu Thr Val
355 360 365

Leu Gly Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
370 375 380

Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
385 390 395 400

Gly Ile Asp Phe Ser Thr Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro
405 410 415

Gly Lys Gly Leu Glu Trp Ile Ala Tyr Ile Tyr Pro Asp Tyr Gly Ile
420 425 430

Thr Asp Tyr Ala Ser Trp Val Asn Gly Arg Phe Thr Ile Ser Leu Asp
435 440 445

Asn Ala Gln Asn Thr Val Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
450 455 460

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Tyr Tyr Ser Arg
465 470 475 480

Gly Trp Gly Ala His Tyr Phe Asn Leu Trp Gly Gln Gly Thr Leu Val
485 490 495

Thr Val Ser Ser
500