

SEQUENCE LISTING

<110> Alektor LLC

<120> ANTI-SIRP-BETA1 ANTIBODIES AND METHODS OF USE THEREOF

<130> 01209-0006-00PCT

<150> US 62/691,913

<151> 2018-06-29

<160> 388

<170> PatentIn version 3.5

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Met Pro Val Pro Ala Ser Trp Pro His Leu Pro Ser Pro Phe Leu Leu
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Met Thr Leu Leu Leu Gly Arg Leu Thr Gly Val Ala Gly Glu Asp Glu
20 25 30

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

Ser Ala Thr Leu Arg Cys Ala Met Thr Ser Leu Ile Pro Val Gly Pro
50 55 60

Ile Met Trp Phe Arg Gly Ala Gly Ala Gly Arg Glu Leu Ile Tyr Asn
65 70 75 80

Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser Glu Leu Thr
85 90 95

Lys Arg Asn Asn Leu Asp Phe Ser Ile Ser Ile Ser Asn Ile Thr Pro
100 105 110

Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys Gly Ser Pro
115 120 125

Asp Asp Val Glu Phe Lys Ser Gly Ala Gly Thr Glu Leu Ser Val Arg
130 135 140

Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro Ala Val Arg Ala Thr
145 150 155 160

Pro Glu His Thr Val Ser Phe Thr Cys Glu Ser His Gly Phe Ser Pro
165 170 175

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

Phe Gln Thr Asn Val Asp Pro Ala Gly Asp Ser Val Ser Tyr Ser Ile
195 200 205

His Ser Thr Ala Arg Val Val Leu Thr Arg Gly Asp Val His Ser Gln
210 215 220

Val Ile Cys Glu Ile Ala His Ile Thr Leu Gln Gly Asp Pro Leu Arg
225 230 235 240

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

Val Thr Gln Gln Pro Met Arg Ala Glu Asn Gln Ala Asn Val Thr Cys
260 265 270

Gln Val Ser Asn Phe Tyr Pro Arg Gly Leu Gln Leu Thr Trp Leu Glu
275 280 285

Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser Thr Leu Ile Glu Asn
290 295 300

Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu Leu Val Asn Thr Cys
305 310 315 320

Ala His Arg Asp Asp Val Val Leu Thr Cys Gln Val Glu His Asp Gly
325 330 335

Gln Gln Ala Val Ser Lys Ser Tyr Ala Leu Glu Ile Ser Ala His Gln
340 345 350

Lys Glu His Gly Ser Asp Ile Thr His Glu Ala Ala Leu Ala Pro Thr
355 360 365

Ala Pro Leu Leu Val Ala Leu Leu Leu Gly Pro Lys Leu Leu Leu Val
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Val Gly Val Ser Ala Ile Tyr Ile Cys Trp Lys Gln Lys Ala
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Gly Ala Ser Ser Arg Ala Thr
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Asp Ala Ser Asn Arg Ala Thr
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Trp Ala Ser Thr Arg Glu Ser
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Gly Ala Ser Asn Arg Ala Thr
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Leu Gly Ser Asn Arg Ala Ser
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Ser Ala Ser Thr Arg Ala Thr
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Asp Ser Ser Asn Arg Ala Thr
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Ala Ala Ser Ser Leu Gln Ser
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Gly Ala Ser Thr Arg Ala Thr
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Gln Gln Arg His Thr Tyr Pro Leu Thr
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Gln Glu Tyr Gly Ser Tyr Arg Thr
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Ser Tyr Ala Met Ser

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Ser Tyr Gly Met Asn

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Gly Tyr Tyr Met His

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Ser Tyr Gly Ile Ser
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Ser Tyr Ala Ile Ser
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Ser Gly Tyr Tyr Trp Gly
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Ser Tyr Gly Ile His
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Asn Tyr Ala Ile Ser
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Ser Tyr Tyr Trp Ser
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Ser Asn Ser Tyr Tyr Trp Gly
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Ser Asn Gly Ile Ser
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Ser Asn Tyr Met Ser
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Ser Gly Tyr Tyr Trp Ala
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Ser Leu Ala Ile Ser
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Ser Ser Ser Tyr Tyr Trp Gly
1 5

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Ser Gly Gly Tyr Tyr Trp Ser
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Ser Tyr Tyr Met His
1 5

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Ser Tyr Tyr Met Ser
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Ser Ser Ser Tyr Ala Trp Gly
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Ser Tyr Gly Met His
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Ser Ser Asp Tyr Tyr Trp Gly
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Thr Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
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Gly

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Val	Ile	Trp	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	Asp	Ser	Val	Lys
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Gly

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Trp	Ile	Asn	Pro	Ser	Ser	Gly	Gly	Thr	Asn	Tyr	Ala	Gln	Lys	Phe	Gln
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Gly

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

Gly

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

Gly

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

Gly

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Ser	Ile	Tyr	His	Ser	Gly	Ser	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
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<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 108

Gly	Ile	Ile	Pro	Ile	Phe	Gly	Thr	Ala	Asn	Tyr	Ala	Gln	Lys	Phe	Gln
1				5					10					15	

Gly

<210> 109
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 109

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

Gly

<210> 110
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 110

Ser	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 111
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 111

Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 112

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 112

Ser Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 113

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 113

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

<210> 114

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 114

Gly Ile Ala Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe Gln
1 5 10 15

Gly

<210> 115
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 115

Ser	Ile	Ser	Tyr	Ser	Gly	Ser	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 116
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 116

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

<210> 117
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 117

Ile	Ile	Asn	Pro	Gly	Gly	Gly	Ser	Thr	Ser	Tyr	Ala	Gln	Lys	Phe	Gln
1				5					10					15	

Gly

<210> 118
<211> 16
<212> PRT
<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 118

Tyr	Ile	Tyr	Ser	Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 119

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 119

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

<210> 120

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 120

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

Gly

<210> 121

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 121

Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe Gln

Gly

<210> 125
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 125

Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val
1 5 10

<210> 126
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 126

Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val
1 5 10

<210> 127
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 127

Glu Gly Ile Ala Ala Thr Asp Ala Tyr Phe Asp Leu
1 5 10

<210> 128
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 128

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

<210> 129

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 129

Glu Gly Asp Glu Asp Trp Phe Asp Pro
1 5

<210> 130

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 130

Glu Thr Arg Gln Asp Ser Ala His Tyr Tyr Gly Met Asp Val
1 5 10

<210> 131

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 131

Gly Gly Ala Met Thr Pro Ala Gly Met Asp Val
1 5 10

<210> 132

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 132

Asp	Gly	Leu	His	Tyr	Gly	Asp	Tyr	Ile	Val	Tyr	Tyr	Gly	Met	Asp	Val
1				5					10					15	

<210> 133

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 133

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

<210> 134

<211> 17

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 134

Pro	Val	Asp	Ser	Ser	Ser	Tyr	Ser	Leu	Gly	Tyr	Tyr	Tyr	Gly	Met	Asp
1				5					10					15	

Val

<210> 135

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 135

Asp	Thr	Tyr	Ala	Tyr	Ser	Tyr	Gly	Met	Asp	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10

<210> 136
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 136

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

<210> 137
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 137

Asp Arg Gly Gly Val Gly Phe Asp Tyr
1 5

<210> 138
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 138

Glu Val Gly Ala Pro Pro Ser Tyr Pro Phe Asp Ile
1 5 10

<210> 139
<211> 14
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 139

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

<210> 140

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 140

Gly Pro Leu Leu Tyr Gly Asp Tyr His Val Arg Tyr Gly Met Asp Val
1 5 10 15

<210> 141

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 141

Ala Lys Pro Arg Gly Asp Tyr Gly Met Asp Val
1 5 10

<210> 142

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 142

Asp Gly Gly Gly Gly Tyr Ala Tyr Glu Tyr Phe Gln His
1 5 10

<210> 143

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 143

Asp	Gly	Arg	Glu	Tyr	Gly	Gly	His	Tyr	Tyr	Gly	Met	Asp	Val
1				5					10				

<210> 144

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 144

Val	Gly	Asn	Met	Asp	Gln	Glu	Tyr	Phe	Asp	Leu
1				5					10	

<210> 145

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 145

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

<210> 146

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 146

Thr	Thr	Tyr	Arg	Asp	Tyr	Tyr	Met	Asp	Val
1				5					10

<210> 147

<211> 13

<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 147

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

<210> 148
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 148

Ser	Gly	Gly	Asp	Tyr	Ser	Gly	Tyr	Asp	Tyr	Ala	Ser	Gly	Met	Asp	Val
1				5					10					15	

<210> 149
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 149

Asp	Gly	Ser	Ala	Gly	Arg	Gln	Glu	His	Gly	Met	Asp	Val
1				5					10			

<210> 150
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 150

Gln	Asp	Leu	Gly	Ser	Ser	His	Trp	His	Phe	Asp	Leu
1				5					10		

<210> 151
<211> 19
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 151

Asp Pro Arg Asp Tyr Ser Ser Gly Ser Ser Gly Gly Gly Trp Gly Tyr
1 5 10 15

Phe Asp Leu

<210> 152
<211> 14
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 152

Ala Pro Tyr Gly Ser Ser Ser Gly Tyr Gly Tyr Phe Asp Leu
1 5 10

<210> 153
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 153

Glu Gly Pro Gly Tyr Pro Ser Tyr Phe Asp Pro
1 5 10

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

<220>

<223> Heavy chain HVR sequence

<400> 154

Glu Gly Leu Tyr Ser Ser Gly Trp Tyr Ile Asp Val
1 5 10

<210> 155

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 155

Gly Asp Ser Ser Ser Gly Gly Leu Asp Leu
1 5 10

<210> 156

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 156

Gly Gln Tyr Thr Gly Ser Leu Asp Val
1 5

<210> 157

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 157

Asp Thr Tyr Tyr Thr Pro Tyr Gly Met Asp Val
1 5 10

<210> 158

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 158

Gly	Arg	Pro	Gln	Ser	Glu	Ser	Tyr	Leu	Leu	Asp	Tyr
1				5					10		

<210> 159

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 159

Glu	Gly	Pro	Glu	Gln	Leu	Trp	Tyr	Leu	Asp	Tyr
1				5					10	

<210> 160

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 160

Ser	Arg	Trp	Gly	Ala	Ser	Gly	Tyr	Tyr	Tyr	Tyr	Met	Asp	Val
1				5					10				

<210> 161

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 161

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

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

<220>
<223> Heavy chain HVR sequence

<400> 162

Gly Gly Ser Asn Tyr Gly Asp Tyr Gly Arg Phe Asp Tyr
1 5 10

<210> 163
<211> 14
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 163

Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
1 5 10

<210> 164
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 164

Val Gly Gln Tyr Pro Ile Tyr Gly Met Asp Val
1 5 10

<210> 165
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 165

Gly Pro Gly His Tyr Tyr Val Ala Gly Met Asp Val

1 5 10

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

<220>
<223> Heavy chain HVR sequence

<400> 166

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

<210> 167
<211> 18
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 167

Glu Gly Ser Ser Phe Trp Ser Gly Ser Ala Val Ser Tyr Tyr Gly Met
1 5 10 15

Asp Val

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

<220>
<223> Heavy chain HVR sequence

<400> 168

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

<210> 169
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 169

Ala Ser Pro Trp Glu Leu Asp Val
1 5

<210> 170
<211> 20
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 170

Asp Leu Gly His Tyr Asp Tyr Trp Ser Gly Ser Arg Asp Tyr Tyr Tyr
1 5 10 15

Gly Met Asp Val
20

<210> 171
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 171

Asp Gly Thr Ile Ala Ala Ala Gly Trp Pro Pro Glu Tyr Phe Gln His
1 5 10 15

<210> 172
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 172

Gly Pro Thr Gly Tyr Lys Asp Lys Trp Arg Tyr Tyr Tyr Gly Met Asp

1 5 10 15

Val

<210> 173
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 173

Glu Gly Gly Gly His Ala Ser Tyr His Tyr Tyr Gly Met Asp Val
1 5 10 15

<210> 174
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 174

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 175
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 175

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 176
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 176

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 177
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 177

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

Glu Arg Ala Thr Ile Thr Cys
20

<210> 178
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 178

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

Glu Arg Ala Thr Ile Asn Cys
20

<210> 179
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 179

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

Glu Pro Ala Ser Ile Ser Cys
20

<210> 180
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 180

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 181
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 181

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
20

<210> 182
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 182

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 183
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 183

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

Asp Arg Val Thr Ile Thr Cys
20

<210> 184
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 184

Glu Ile Val Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly

<210> 188
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 188

Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Ser	Pro	Gln	Leu	Leu	Ile	Tyr
1				5					10					15

<210> 189
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 189

Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Ser	Pro	Gln	Val	Leu	Ile	Tyr
1				5					10					15

<210> 190
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 190

Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr
1				5					10					15

<210> 191
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 191

Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Ser	Pro	Gln	Leu	Leu	Ile	Phe
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

<210> 192
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 192

Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
20 25 30

<210> 193
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 193

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

Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys
20 25 30

<210> 194
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 194

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

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

<210> 195
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light chain framework sequence

<400> 195

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 1 5 10 15

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

<210> 196
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light chain framework sequence

<400> 196

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

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

<210> 197
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light chain framework sequence

<400> 197

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
 1 5 10 15

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
20 25 30

<210> 198
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 198

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys
20 25 30

<210> 199
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 199

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr
1 5 10 15

Leu Thr Ile Ser Ser Leu Gln Pro Asp Asp Phe Ala Thr Tyr Tyr Cys
20 25 30

<210> 200
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 200

Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
1 5 10

<210> 201
<211> 30
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 201

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

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

<210> 202
<211> 30
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 202

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

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

<210> 203
<211> 30
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 203

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr

20

25

30

<210> 204
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 204

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser
 20 25 30

<210> 205
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 205

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 Ala Val Ser Gly Tyr Ser Ile Ser
 20 25 30

<210> 206
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 206

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 Thr Val Ser Gly Gly Ser Ile Ser
 20 25 30

<210> 207
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 207

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser
 20 25 30

<210> 208
 <211> 30
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 208

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

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

<210> 209
 <211> 30
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<220>
 <223> Heavy chain framework sequence

<400> 209

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser
 20 25 30

<210> 210
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 210

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

<210> 211
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 211

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala
 1 5 10

<210> 212
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 212

Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
 1 5 10

<210> 213
 <211> 14
 <212> PRT
 <213> Artificial sequence

<220>

<223> Heavy chain framework sequence

<400> 213

Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Ile Gly
1 5 10

<210> 214

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain framework sequence

<400> 214

Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly
1 5 10

<210> 215

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain framework sequence

<400> 215

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
1 5 10 15

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Lys
20 25 30

<210> 216

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain framework sequence

<400> 216

Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
1 5 10 15

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
 20 25 30

<210> 217
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 217

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

Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg
 20 25 30

<210> 218
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 218

Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr Met Glu
 1 5 10 15

Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg
 20 25 30

<210> 219
 <211> 32
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy chain framework sequence

<400> 219

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

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

<210> 220
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 220

Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys
1 5 10 15

Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 221
<211> 32
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 221

Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr Met Glu
1 5 10 15

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

<210> 222
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 222

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser

1 5 10

<210> 223
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 223

Trp Gly Arg Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 224
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 224

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 225
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 225

Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
1 5 10

<210> 226
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain framework sequence

<400> 226

Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
1 5 10

<210> 227

<211> 11

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain framework sequence

<400> 227

Trp Gly Gln Gly Thr Thr Val Ser Val Ser Ser
1 5 10

<210> 228

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 228

Ser Phe Gly Met Asn
1 5

<210> 229

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 229

Ala Tyr Gly Met Asn
1 5

<210> 230

<211> 5

<212> PRT

<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 230

Arg Tyr Gly Met His
1 5

<210> 231
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 231

Asp Tyr Gly Met His
1 5

<210> 232
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 232

Thr Tyr Gly Met His
1 5

<210> 233
<211> 6
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 233

Ala His Tyr Tyr Trp Gly
1 5

<210> 234
<211> 6

<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 234

Pro His Tyr Tyr Trp Gly
1 5

<210> 235
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 235

Ser Tyr Tyr Met Ala
1 5

<210> 236
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 236

Ser Tyr Tyr Met Val
1 5

<210> 237
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 237

Ser Phe Tyr Ile Ser
1 5

<210> 238
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 238

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

Gly

<210> 239
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 239

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

Gly

<210> 240
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 240

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

Gly

<210> 241
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 241

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

Gly

<210> 242
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 242

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

<210> 243
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 243

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

<210> 244
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 244

His	Ile	Trp	Tyr	Glu	Gly	Ser	Asn	Lys	Val	Tyr	Ala	Asp	Ser	Val	Lys
1				5					10					15	

Gly

<210> 245
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 245

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

<210> 246
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 246

Ser	Ile	Phe	His	Ser	Gly	His	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 247
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 247

Ser	Ile	Tyr	His	Ser	Gly	His	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 248
<211> 16
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 248

Ser	Ile	Tyr	Gln	Ser	Gly	His	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser
1				5					10					15	

<210> 249
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 249

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

Gly

<210> 250
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 250

Ile	Ile	Asn	Pro	Ser	Ser	Gly	Ala	Thr	Asn	Tyr	Ala	Gln	Lys	Phe	Gln
1				5					10					15	

Gly

<210> 251

<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 251

Ile	Ile	Asn	Pro	Ser	Ser	Gly	His	Thr	Asn	Tyr	Ala	Gln	Lys	Leu	Gln
1				5					10					15	

Gly

<210> 252
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 252

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

Gly

<210> 253
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy chain HVR sequence

<400> 253

Asp	Gln	Thr	Ala	Ala	Trp	Gly	Ile	Trp	Gly	Met	Asp	Val
1				5					10			

<210> 254
<211> 11
<212> PRT
<213> Artificial sequence

<220>

<223> Heavy chain HVR sequence

<400> 254

Ala Gly Ala Met Thr Pro Ala Gly Met Asp Val
1 5 10

<210> 255

<211> 23

<212> PRT

<213> Artificial sequence

<220>

<223> Light chain FR sequence

<400> 255

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

Glu Arg Ala Thr Leu Ser Cys
20

<210> 256

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 256

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

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

<210> 257

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Light chain FR sequence

<400> 257

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

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

<210> 258

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Light chain FR sequence

<400> 258

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

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

<210> 259

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 259

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

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

<210> 260

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 260

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

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

<210> 261

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 261

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

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

<210> 262

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 262

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

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

<210> 263

<211> 30

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 263

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

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

<210> 264

<211> 14

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 264

Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met Gly
1 5 10

<210> 265

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 265

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

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

<210> 266

<211> 32

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain FR sequence

<400> 266

Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr Met Glu
1 5 10 15

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

<210> 267

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 267

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

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

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

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

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

<210> 268

<211> 122

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 268

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

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

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

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

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

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

Ala Lys Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val Trp
100 105 110

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

<210> 269

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 269

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Ser Ser His Pro
85 90 95

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

<210> 270
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 270

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

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

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

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

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

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

85

90

95

Ala Arg Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val Trp
 100 105 110

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

<210> 271
 <211> 107
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 271

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Leu Phe His Pro Pro
 85 90 95

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

<210> 272
 <211> 121
 <212> PRT
 <213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 272

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

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

Arg Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 273

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 273

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser

20

25

30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Asp Ala Pro
 85 90 95

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

<210> 274

<211> 125

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 274

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30

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

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
 50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

<210> 275

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 275

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Leu Phe His Pro Pro
85 90 95

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

<210> 276

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 276

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Glu Gly Asp Glu Asp Trp Phe Asp Pro Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 277

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 277

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Gly His Leu Pro
 85 90 95

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

<210> 278
 <211> 113
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 278

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
 20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

His Tyr Ile Ala Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 279
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 279

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Glu Thr Arg Gln Asp Ser Ala His Tyr Tyr Gly Met Asp Val
100 105 110

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

<210> 280
<211> 108
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 280

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

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

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

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

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

<210> 281
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 281

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

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

Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

Ala Arg Gly Gly Ala Met Thr Pro Ala Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 282
<211> 114
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 282

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr His Ser Val Pro Pro Ile Thr Phe Gly Gly Gly Thr Lys Val Glu
100 105 110

Ile Lys

<210> 283

<211> 125

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 283

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Gly Leu His Tyr Gly Asp Tyr Ile Val Tyr Tyr Gly Met

100

105

110

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

<210> 284

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 284

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
 20 25 30

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

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

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

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

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

<210> 285

<211> 120

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 285

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Val Pro Arg Gly Asp Leu Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 286

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 286

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser

35

40

45

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

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

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

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

<210> 287

<211> 126

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 287

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

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

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 288
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 288

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Leu Asp Asn Leu Pro Tyr
85 90 95

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

<210> 289
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 289

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Thr Tyr Ala Tyr Ser Tyr Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 290

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 290

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

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

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

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

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

Leu Arg Ser Pro Ile Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 291
 <211> 119
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 291

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 Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
 20 25 30

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

Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60

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

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

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

Thr Leu Val Thr Val Ser Ser
 115

<210> 292
 <211> 107
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 292

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

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

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

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

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

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

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

<210> 293
 <211> 118
 <212> PRT
 <213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 293

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

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

Leu Val Thr Val Ser Ser
115

<210> 294

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 294

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

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

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

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

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

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

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

<210> 295
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 295

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Asn
20 25 30

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

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

100

Cys Ala Arg Glu Val Gly Ala Pro Pro Ser Tyr Pro Phe Asp Ile Trp
100 105 110

Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 296
<211> 113
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 296

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

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

Lys

<210> 297

<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 297

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Ala Asn Tyr Tyr Asp Ser Ser Gly Tyr Ser Gly Leu Asp Leu
100 105 110

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

<210> 298
<211> 113
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 298

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Asp Asp Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 299
<211> 125
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 299

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu

50

55

60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Pro Leu Leu Tyr Gly Asp Tyr His Val Arg Tyr Gly Met
100 105 110

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

<210> 300

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 300

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

Glu Arg Ala Thr Leu Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

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

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

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

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

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

<210> 301
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 301

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Ala Lys Pro Arg Gly Asp Tyr Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 302
<211> 112
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 302

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

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

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

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

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

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

<210> 303

<211> 122

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 303

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Gly Gly Gly Gly Tyr Ala Tyr Glu Tyr Phe Gln His Trp
100 105 110

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

<210> 304
<211> 113
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 304

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

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

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Leu Ser Pro Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
100 105 110

Lys

<210> 305
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 305

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Gly Arg Glu Tyr Gly Gly His Tyr Tyr Gly Met Asp Val
100 105 110

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

<210> 306
<211> 112

<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 306

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

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

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

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

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

Leu Arg Ile Pro Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 307
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 307

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

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

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

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Val Gly Asn Met Asp Gln Glu Tyr Phe Asp Leu Trp Gly Arg
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 308

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 308

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly 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 Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 309
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 309

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

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

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

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

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

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

Arg Pro Thr Arg Tyr Gly Tyr Asp Arg Leu Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 310

<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 310

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

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

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

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

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

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

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

<210> 311
<211> 119
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 311

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Thr Thr Tyr Arg Asp Tyr Tyr Met Asp Val Trp Gly Lys Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 312
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 312

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

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

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

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

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser

65		70		75		80
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Leu Asn Ile His Pro Trp						
		85		90		95
Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys						
		100		105		
<210> 313						
<211> 122						
<212> PRT						
<213> Artificial sequence						
<220>						
<223> Heavy Chain Variable Region						
<400> 313						
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 Ala Val Ser Gly Tyr Ser Ile Ser Ser Gly						
		20		25		30
Tyr Tyr Trp Ala Trp Ile Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp						
		35		40		45
Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu						
		50		55		60
Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Ser						
65			70		75	80
Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys						
		85		90		95
Ala Arg Asp Arg Ser Arg Gly Tyr Pro Val Tyr Gly Met Asp Val Trp						
		100		105		110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser						
		115		120		

<210> 314
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 314

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly 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 Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 315
<211> 125
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 315

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

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

	20		25		30										
Ala	Ile	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met
	35						40					45			
Gly	Gly	Ile	Ile	Pro	Ile	Phe	Gly	Thr	Ala	Asn	Tyr	Ala	Gln	Lys	Phe
	50					55					60				
Gln	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Glu	Ser	Thr	Ser	Thr	Ala	Tyr
65					70					75					80
Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85						90					95	
Ala	Arg	Ser	Gly	Gly	Asp	Tyr	Ser	Gly	Tyr	Asp	Tyr	Ala	Ser	Gly	Met
			100					105						110	
Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser			
	115						120					125			
<210>	316														
<211>	111														
<212>	PRT														
<213>	Artificial sequence														
<220>															
<223>	Light Chain Variable Region														
<400>	316														
Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Leu	Ser	Leu	Pro	Val	Thr	Pro	Gly
1				5					10					15	
Glu	Pro	Ala	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Gln	Ser	Leu	Leu	His	Ser
			20					25					30		
Asn	Gly	Tyr	Asn	Tyr	Leu	Asp	Trp	Tyr	Leu	Gln	Lys	Pro	Gly	Gln	Ser
	35						40					45			
Pro	Gln	Leu	Leu	Ile	Tyr	Leu	Gly	Ser	Asn	Arg	Ala	Ser	Gly	Val	Pro
	50					55					60				

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

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

Arg Gly Leu Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 317

<211> 122

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 317

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Gly Ser Ala Gly Arg Gln Glu His Gly Met Asp Val Trp
100 105 110

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

<210> 318
 <211> 113
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 318

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
 20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
 85 90 95

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

Lys

<210> 319
 <211> 121
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 319

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

Arg Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 320
 <211> 108
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 320

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Asp Gly Asn Phe Pro
85 90 95

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

<210> 321
<211> 129
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 321

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

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

Trp Ile Gly Ser Ile Ser Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

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

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

Trp Gly Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu Val Thr Val Ser
115 120 125

Ser

<210> 322
<211> 112
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 322

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

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

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

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

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

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

<210> 323
<211> 123
<212> PRT
<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 323

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Ala Pro Tyr Gly Ser Ser Ser Gly Tyr Gly Tyr Phe Asp Leu
100 105 110

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

<210> 324

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 324

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Leu Ser Ser Pro
85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Val Glu Asn Gln
100 105

<210> 325
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 325

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

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

Trp Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Val Tyr Asn Pro Ser
50 55 60

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

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr

85

90

95

Cys Ala Arg Glu Gly Pro Gly Tyr Pro Ser Tyr Phe Asp Pro Trp Gly
 100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 326

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 326

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly 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 Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

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

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

<210> 327

<211> 121

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 327

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Glu Gly Leu Tyr Ser Ser Gly Trp Tyr Ile Asp Val Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 328

<211> 113

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 328

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser

20

25

30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
 85 90 95

Asp Phe Leu Thr Pro Ile Thr Phe Gly Gly Gly Thr Lys Val Glu Ile
 100 105 110

Lys

<210> 329

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 329

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 Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr
 20 25 30

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

Gly Tyr Ile Tyr Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys
 50 55 60

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

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

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

Leu Val Thr Val Ser Ser
115

<210> 330
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 330

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 Asp Ile Ser Asn Tyr
20 25 30

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

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

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

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

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

<210> 331
<211> 117
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 331

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

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

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

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

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

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

Arg Gly Gln Tyr Thr Gly Ser Leu Asp Val Trp Gly Gln Gly Thr Met
100 105 110

Val Thr Val Ser Ser
115

<210> 332
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 332

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Asp Asn Thr Phe Pro Tyr
 85 90 95

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

<210> 333
 <211> 120
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 333

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Gly Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Thr Tyr Tyr Thr Pro Tyr Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 334
<211> 112
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 334

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

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

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

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

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

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

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

<210> 335
 <211> 121
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 335

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 336
 <211> 106
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 336

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly 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 Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Phe Ser His Arg Thr
 85 90 95

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

<210> 337
 <211> 120
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 337

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 338
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 338

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg His Thr Tyr Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys

100

105

<210> 339
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 339

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

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

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

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

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

<210> 340
 <211> 107
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 340

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly 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 Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 341

<211> 120

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 341

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe

50

55

60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Glu Ser Gly Thr Asp Phe Gly Thr Ile Ser Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 342

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 342

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

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

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

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

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

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

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

<210> 343
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 343

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

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

Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

Ala Arg Gly Gly Ser Asn Tyr Gly Asp Tyr Gly Arg Phe Asp Tyr Trp
100 105 110

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

<210> 344
<211> 108
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 344

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Asp Glu His Pro Pro
85 90 95

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

<210> 345

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 345

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
100 105 110

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

<210> 346
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 346

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 Asp Ile Thr Asn Tyr
20 25 30

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

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

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

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

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

<210> 347
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 347

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

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

Cys Ala Arg Val Gly Gln Tyr Pro Ile Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 348
<211> 107
<212> PRT
<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 348

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

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

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

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

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

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

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

<210> 349

<211> 121

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 349

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

Gly Trp Ile Ser Ala Tyr Asn Gly Asn Thr Asn Tyr Ala Gln Lys Leu
50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Gly Pro Gly His Tyr Tyr Val Ala Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 350
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 350

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

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

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

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

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Phe Asp Phe Pro Ile
85 90 95

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

<210> 351
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 351

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

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

Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

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

Gln Gly Thr Thr Val Ser Val Ser Ser
115 120

<210> 352
<211> 106
<212> PRT
<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 352

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly 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 Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 353

<211> 126

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 353

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

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

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

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

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

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

Arg Glu Gly Ser Ser Phe Trp Ser Gly Ser Ala Val Ser Tyr Tyr Gly
100 105 110

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

<210> 354
<211> 105
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 354

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

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser Phe Leu
20 25 30

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

Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser
50 55 60

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

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Val Val Ser Val Pro Thr Phe

85

90

95

Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 355

<211> 122

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 355

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

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

Ile Gly Ser Ile Tyr His Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

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

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

<210> 356

<211> 108

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 356

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Arg Ser Ser
20 25 30

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

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

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

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Leu Tyr Ser Ser Pro
85 90 95

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

<210> 357

<211> 117

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 357

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

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

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

35

40

45

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

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

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

Ala Arg Ala Ser Pro Trp Glu Leu Asp Val Trp Gly Gln Gly Thr Met
 100 105 110

Val Thr Val Ser Ser
 115

<210> 358

<211> 107

<212> PRT

<213> Artificial sequence

<220>

<223> Light Chain Variable Region

<400> 358

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 Asp Ile Ser Asn Tyr
 20 25 30

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

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

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

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

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

<210> 359

<211> 130

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 359

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

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

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

Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val
115 120 125

Ser Ser
130

<210> 360
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 360

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

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Asp 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 Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 361
<211> 125
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 361

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

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

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

Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Gly Thr Ile Ala Ala Ala Gly Trp Pro Pro Glu Tyr Phe
100 105 110

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

<210> 362
<211> 107
<212> PRT
<213> Artificial sequence

<220>
<223> Light Chain Variable Region

<400> 362

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 Asp Ile Thr Asn Tyr
20 25 30

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

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

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Phe His Pro Pro Leu
85 90 95

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

<210> 363
<211> 127
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 363

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Ser
20 25 30

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

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

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

Cys Ala Arg Gly Pro Thr Gly Tyr Lys Asp Lys Trp Arg Tyr Tyr Tyr
100 105 110

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

<210> 364
 <211> 113
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 364

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Phe Ser
 20 25 30

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

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
 85 90 95

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

Lys

<210> 365
 <211> 124
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 365

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
 20 25 30

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

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

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Glu Gly Gly Gly His Ala Ser Tyr His Tyr Tyr Gly Met Asp
 100 105 110

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

<210> 366
 <211> 122
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 366

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

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

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

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

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

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

Ala Lys Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val Trp
100 105 110

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

<210> 367
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 367

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

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

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

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

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

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

85

90

95

Ala Lys Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val Trp
 100 105 110

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

<210> 368

<211> 122

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 368

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

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

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

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

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

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

Ala Lys Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val Trp
 100 105 110

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

<210> 369
 <211> 122
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 369

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

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

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

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

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

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

Ala Lys Asp Phe Thr Glu Val Val Gly Trp Leu Gly Met Asp Val Trp
 100 105 110

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

<210> 370
 <211> 108
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light Chain Variable Region

<400> 370

Glu Val Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly

1 5 10 15
 Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30
 Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45
 Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
 65 70 75 80
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Ser Ser His Pro
 85 90 95
 Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 371
 <211> 121
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 371

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ala Arg Tyr
 20 25 30
 Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Ala Ile Ser Gly Leu Ala Gly Pro Thr Tyr Ala Asp Ser Val Lys
 50 55 60

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

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

Arg Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 372
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 372

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

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

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

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

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

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

Arg Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 373
<211> 122
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 373

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

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

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

Ala His Ile Trp Tyr Glu Gly Ser Asn Lys Val Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val Trp
100 105 110

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

<210> 374
<211> 121
<212> PRT
<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 374

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

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

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

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

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

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

Arg Asp Gln Thr Ala Ala Ala Ala Ile Trp Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 375

<211> 121

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 375

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

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

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

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

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

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

Arg Asp Gln Thr Ala Ala Trp Gly Ile Trp Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 376
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 376

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 Ala Val Ser Gly Tyr Ser Ile Ser Ala His
20 25 30

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

Ile Gly Ser Ile Phe His Ser Gly His Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

Ala Arg Gly Gly Ala Met Thr Pro Ala Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 377
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 377

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 Ala Val Ser Gly Tyr Ser Ile Ser Pro His
20 25 30

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

Ile Gly Ser Ile Tyr His Ser Gly His Thr Tyr Tyr Asn Pro Ser Leu
50 55 60

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

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

Ala Arg Gly Gly Ala Met Thr Pro Ala Gly Met Asp Val Trp Gly Gln
100 105 110

Gly Thr Thr Val Thr Val Ser Ser

115

120

<210> 378
 <211> 120
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 378

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 Ala Val Ser Gly Tyr Ser Ile Ser Ala His
 20 25 30

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

Ile Gly Ser Ile Phe His Ser Gly His Thr Tyr Tyr Asn Pro Ser Leu
 50 55 60

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

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

Ala Arg Ala Gly Ala Met Thr Pro Ala Gly Met Asp Val Trp Gly Gln
 100 105 110

Gly Thr Thr Val Thr Val Ser Ser
 115 120

<210> 379
 <211> 123
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Heavy Chain Variable Region

<400> 379

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

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

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

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

Ala Arg Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
100 105 110

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

<210> 380

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 380

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met Val Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35

40

45

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

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
 100 105 110

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

<210> 381

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy Chain Variable Region

<400> 381

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Phe
 20 25 30

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

Gly Ile Ile Asn Pro Ser Ser Gly His Thr Asn Tyr Ala Gln Lys Leu
 50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
100 105 110

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

<210> 382
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Heavy Chain Variable Region

<400> 382

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asp Thr Gly Glu Tyr Ser Tyr Ser Pro His Gly Met Asp Val
100 105 110

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

<210> 383
 <211> 12
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Light chain HVR sequence

<400> 383

Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
 1 5 10

<210> 384
 <211> 398
 <212> PRT
 <213> Homo sapiens

<400> 384

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

Met Thr Leu Leu Leu Gly Arg Leu Thr Gly Val Ala Gly Glu Glu Glu
 20 25 30

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

Ser Ala Thr Leu His Cys Thr Val Thr Ser Leu Ile Pro Val Gly Pro
 50 55 60

Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly Arg Glu Leu Ile Tyr Asn
 65 70 75 80

Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser Asp Leu Thr
 85 90 95

Lys Arg Asn Asn Met Asp Phe Ser Ile Arg Ile Ser Asn Ile Thr Pro
 100 105 110

Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys Gly Ser Pro
 115 120 125

Asp His Val Glu Phe Lys Ser Gly Ala Gly Thr Glu Leu Ser Val Arg
130 135 140

Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro Ala Ala Arg Ala Thr
145 150 155 160

Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser His Gly Phe Ser Pro
165 170 175

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

Phe Gln Thr Asn Val Asp Pro Ala Gly Asp Ser Val Ser Tyr Ser Ile
195 200 205

His Ser Thr Ala Lys Val Val Leu Thr Arg Glu Asp Val His Ser Gln
210 215 220

Val Ile Cys Glu Val Ala His Val Thr Leu Gln Gly Asp Pro Leu Arg
225 230 235 240

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

Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln Val Asn Val Thr Cys
260 265 270

Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln Leu Thr Trp Leu Glu
275 280 285

Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser Thr Leu Thr Glu Asn
290 295 300

Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu Leu Val Asn Val Ser
305 310 315 320

Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln Val Glu His Asp Gly
325 330 335

Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys Val Ser Ala His Pro
340 345 350

Lys Glu Gln Gly Ser Asn Thr Ala Pro Gly Pro Ala Leu Ala Ser Ala
355 360 365

Ala Pro Leu Leu Ile Ala Phe Leu Leu Gly Pro Lys Val Leu Leu Val
370 375 380

Val Gly Val Ser Val Ile Tyr Val Tyr Trp Lys Gln Lys Ala
385 390 395

<210> 385
<211> 504
<212> PRT
<213> Homo sapiens

<400> 385

Met Glu Pro Ala Gly Pro Ala Pro Gly Arg Leu Gly Pro Leu Leu Cys
1 5 10 15

Leu Leu Leu Ala Ala Ser Cys Ala Trp Ser Gly Val Ala Gly Glu Glu
20 25 30

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

Glu Thr Ala Thr Leu Arg Cys Thr Ala Thr Ser Leu Ile Pro Val Gly
50 55 60

Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly Arg Glu Leu Ile Tyr
65 70 75 80

Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser Asp Leu
85 90 95

Thr Lys Arg Asn Asn Met Asp Phe Ser Ile Arg Ile Gly Asn Ile Thr
100 105 110

Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys Gly Ser
115 120 125

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

Arg Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro Ala Ala Arg Ala
145 150 155 160

Thr Pro Gln His Thr Val Ser Phe Thr Cys Glu Ser His Gly Phe Ser
165 170 175

Pro Arg Asp Ile Thr Leu Lys Trp Phe Lys Asn Gly Asn Glu Leu Ser
180 185 190

Asp Phe Gln Thr Asn Val Asp Pro Val Gly Glu Ser Val Ser Tyr Ser
195 200 205

Ile His Ser Thr Ala Lys Val Val Leu Thr Arg Glu Asp Val His Ser
210 215 220

Gln Val Ile Cys Glu Val Ala His Val Thr Leu Gln Gly Asp Pro Leu
225 230 235 240

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

Glu Val Thr Gln Gln Pro Val Arg Ala Glu Asn Gln Val Asn Val Thr
260 265 270

Cys Gln Val Arg Lys Phe Tyr Pro Gln Arg Leu Gln Leu Thr Trp Leu
275 280 285

Glu Asn Gly Asn Val Ser Arg Thr Glu Thr Ala Ser Thr Val Thr Glu
290 295 300

Asn Lys Asp Gly Thr Tyr Asn Trp Met Ser Trp Leu Leu Val Asn Val
305 310 315 320

Ser Ala His Arg Asp Asp Val Lys Leu Thr Cys Gln Val Glu His Asp
325 330 335

Gly Gln Pro Ala Val Ser Lys Ser His Asp Leu Lys Val Ser Ala His
340 345 350

Pro Lys Glu Gln Gly Ser Asn Thr Ala Ala Glu Asn Thr Gly Ser Asn
355 360 365

Glu Arg Asn Ile Tyr Ile Val Val Gly Val Val Cys Thr Leu Leu Val
370 375 380

Ala Leu Leu Met Ala Ala Leu Tyr Leu Val Arg Ile Arg Gln Lys Lys
385 390 395 400

Ala Gln Gly Ser Thr Ser Ser Thr Arg Leu His Glu Pro Glu Lys Asn
405 410 415

Ala Arg Glu Ile Thr Gln Asp Thr Asn Asp Ile Thr Tyr Ala Asp Leu
420 425 430

Asn Leu Pro Lys Gly Lys Lys Pro Ala Pro Gln Ala Ala Glu Pro Asn
435 440 445

Asn His Thr Glu Tyr Ala Ser Ile Gln Thr Ser Pro Gln Pro Ala Ser
450 455 460

Glu Asp Thr Leu Thr Tyr Ala Asp Leu Asp Met Val His Leu Asn Arg
465 470 475 480

Thr Pro Lys Gln Pro Ala Pro Lys Pro Glu Pro Ser Phe Ser Glu Tyr
485 490 495

Ala Ser Val Gln Val Pro Arg Lys
500

<210> 386
<211> 397
<212> PRT
<213> Mus musculus

<400> 386

Met Leu Leu Leu Asp Ala Trp Thr His Ile Pro His Cys Val Leu Leu

1	5	10	15
Leu Ile Leu	Leu Leu Gly	Leu Lys Gly	Ala Ala Val Arg Glu Leu Lys
	20	25	30
Val Ile Gln	Pro Val Lys	Ser Phe Phe	Val Gly Ala Gly Gly Ser Ala
	35	40	45
Thr Leu Asn	Cys Thr Val	Thr Tyr Leu	Leu Pro Val Gly Pro Ile Lys
	50	55	60
Trp Tyr Arg	Gly Val Gly	Gln Ser Arg	Leu Leu Ile Tyr Pro Phe Thr
65	70	75	80
Gly Glu Tyr	Phe Pro Arg	Ile Thr Ser	Val Ser Asp Val Lys Lys Arg
	85	90	95
Ser Asn Leu	Asp Phe Ser	Ile Arg Ile	Ser Asn Val Thr Pro Ala Asp
	100	105	110
Ser Gly Thr	Tyr Tyr Cys	Val Lys Phe	Gln Arg Gly Ser Ser Glu Pro
	115	120	125
Asp Ile Glu	Ile Gln Ser	Gly Gly Gly	Thr Glu Leu Ser Val Phe Ala
	130	135	140
Lys Pro Ser	Ser Pro Met	Val Ser Gly	Pro Ala Ala Arg Ala Val Pro
145	150	155	160
Gln Gln Thr	Val Thr Phe	Thr Cys Arg	Ser His Gly Phe Phe Pro Gln
	165	170	175
Asn Leu Thr	Leu Lys Trp	Phe Lys Asn	Gly Asn Glu Ile Ser His Leu
	180	185	190
Glu Thr Ser	Val Glu Pro	Glu Glu Thr	Ser Val Ser Tyr Arg Val Ser
	195	200	205
Ser Thr Val	Gln Val Val	Leu Glu Pro	Arg Asp Val Arg Ser Gln Ile
	210	215	220

Ile Cys Glu Val Asp His Val Thr Leu Asp Arg Ala Pro Leu Arg Gly
 225 230 235 240

Ile Ala His Ile Ser Glu Ile Ile Gln Val Pro Pro Thr Leu Glu Ile
 245 250 255

Ser Gln Gln Pro Thr Met Val Trp Asn Val Ile Asn Val Thr Cys Gln
 260 265 270

Ile Gln Lys Phe Tyr Pro Arg Arg Phe Gln Val Thr Trp Leu Glu Asn
 275 280 285

Gly Asn Ile Ser Arg Arg Glu Val Pro Phe Thr His Ile Val Asn Lys
 290 295 300

Asp Gly Thr Tyr Asn Trp Ile Ser Trp Leu Leu Val Asn Ile Ser Ala
 305 310 315 320

Leu Glu Glu Asn Met Val Val Thr Cys Gln Val Glu His Asp Gly Gln
 325 330 335

Ala Glu Val Ile Glu Thr His Thr Val Val Val Thr Glu His Gln Arg
 340 345 350

Val Lys Gly Thr Ser Thr Met Ser Glu Leu Lys Thr Ala Gly Ile Ala
 355 360 365

Lys Ile Pro Val Ala Val Leu Leu Gly Ser Lys Ile Leu Leu Leu Ile
 370 375 380

Ala Ala Thr Val Ile Tyr Met Arg Lys Lys Gln Asn Ala
 385 390 395

<210> 387
 <211> 118
 <212> PRT
 <213> Artificial sequence

<220>
 <223> SIRPalpha domain 1 (IgV domain)

<400> 387

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

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

Gly Pro Ile Gln Trp Phe Arg Gly Ala Gly Pro Gly Arg Glu Leu Ile
35 40 45

Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser Asp
50 55 60

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

Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys Gly
85 90 95

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

Val Arg Ala Lys Pro Ser
115

<210> 388

<211> 119

<212> PRT

<213> Artificial sequence

<220>

<223> SIRPbeta1 domain 1 (IgV domain)

<400> 388

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

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

Val Gly Pro Ile Met Trp Phe Arg Gly Ala Gly Ala Gly Arg Glu Leu
35 40 45

Ile Tyr Asn Gln Lys Glu Gly His Phe Pro Arg Val Thr Thr Val Ser
50 55 60

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

Ile Thr Pro Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys
85 90 95

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

Ser Val Arg Ala Lys Pro Ser
115