SEQUENCE LISTING

<110> Alector 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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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
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Ala Asp Ala Gly Thr Tyr Tyr Cys Val Lys Phe Arg Lys Gly Ser Pro
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Asp Asp Val Glu Phe Lys Ser Gly Ala Gly Thr Glu Leu Ser Val Arg
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Ala Lys Pro Ser Ala Pro Val Val Ser Gly Pro Ala Val Arg Ala Thr
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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
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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
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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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Ser Tyr Gly Ile His
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Ser Tyr Tyr Trp Ser
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Gly

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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
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Gly

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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
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Gly

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

Gly

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

Gly

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<220>
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<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>
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<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
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<220>
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<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
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<220>
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<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>
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<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
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<220>
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<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
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<220>
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<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>
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<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
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<220>
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<400> 121

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

1 5 10 15

Gly

<210> 122
<211> 16
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<220>
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<400> 122

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

<210> 123
<211> 17
<212> PRT
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<220>
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<400> 123

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

Gly

<210> 124
<211> 17
<212> PRT
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<220>
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<400> 124

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

Gly

<210> 125
<211> 13
<212> PRT
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<220>
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<400> 125

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

<210> 126
<211> 13
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<220>
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<400> 126

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

<210> 127
<211> 12
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<220>
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<400> 127

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

<210> 128
<211> 16
<212> PRT
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<220>
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<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
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<220>
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<400> 129

Glu Gly Asp Glu Asp Trp Phe Asp Pro
1 5

<210> 130
<211> 14
<212> PRT
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<220>
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<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>
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<400> 131

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

<210> 132
<211> 16
<212> PRT
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<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>
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<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>
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<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
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<220>
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<400> 137

Asp Arg Gly Gly Val Gly Phe Asp Tyr
1 5

<210> 138
<211> 12
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<220>
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<400> 138

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

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

<220>
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<400> 139

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

<210> 140
<211> 16
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<220>
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<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>
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<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>
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<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>
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<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>
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<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
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<220>
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<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>
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<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>
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<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
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<220>
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<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>
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<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
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<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>
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<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
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<213> Artificial sequence

<220>
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<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>
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<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
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<213> Artificial sequence

<220>
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<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>
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<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>
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<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

1 5 10 15

Glu Arg Ala Thr Ile Thr Cys
20

<210> 185
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 185

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
20

<210> 186
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 186

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

<210> 187
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Light chain framework sequence

<400> 187

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

<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>
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<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
<212> PRT
<213> Artificial sequence

<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 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
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<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
```

```
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
```