SEQUENCE LISTING

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<120> CD27L ANTIGEN BINDING PROTEINS

<130> A-1437-US-NP

<140> XX/XXX,XXX
<141> 2012-09-19

<150> 61/538,024
<151> 2011-09-22

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<170> PatentIn version 3.5

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35 40 45

Pro Leu Glu Ser Leu Gly Trp Asp Val Ala Glu Leu Gln Leu Asn His
50 55 60

Thr Gly Pro Gln Gln Asp Pro Arg Leu Tyr Trp Gln Gly Gly Pro Ala
65 70 75 80

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

Arg Ile His Arg Asp Gly Ile Tyr Met Val His Ile Gln Val Thr Leu
100 105 110

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

Leu Ser Phe His Gln Gly Cys Thr Ile Ala Ser Gln Arg Leu Thr Pro
145                 150                 155                 160

Leu Ala Arg Gly Asp Thr Leu Cys Thr Asn Leu Thr Gly Thr Leu Leu
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Pro Ser Arg Asn Thr Asp Glu Thr Phe Phe Gly Val Gln Trp Val Arg
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Trp Ala Gln Gly Lys Leu Cys Cys Gln Met Cys Glu Pro Gly Thr Phe
        35                  40                  45

Leu Val Lys Asp Cys Asp Gln His Arg Lys Ala Ala Gln Cys Asp Pro
    50                  55                  60

Cys Ile Pro Gly Val Ser Phe Ser Pro Asp His His Thr Arg Pro His
65                  70                  75                  80
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Cys Glu Ser Cys Arg His Cys Asn Ser Gly Leu Leu Val Arg Asn Cys
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Thr Ile Thr Ala Asn Ala Glu Cys Ala Cys Arg Asn Gly Trp Gln Cys
            100                 105                 110

Arg Asp Lys Glu Cys Thr Glu Cys Asp Pro Leu Pro Asn Pro Ser Leu
        115                 120                 125

Thr Ala Arg Ser Ser Gln Ala Leu Ser Pro His Pro Gln Pro Thr His
    130                 135                 140

Leu Pro Tyr Val Ser Glu Met Leu Glu Ala Arg Thr Ala Gly His Met
145                 150                 155                 160

Gln Thr Leu Ala Asp Phe Arg Gln Leu Pro Ala Arg Thr Leu Ser Thr
                165                 170                 175

His Trp Pro Pro Gln Arg Ser Leu Cys Ser Ser Asp Phe Ile Arg Ile
            180                 185                 190

Leu Val Ile Phe Ser Gly Met Phe Leu Val Phe Thr Leu Ala Gly Ala
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Leu Phe Leu His Gln Arg Arg Lys Tyr
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120

cagcacccag ggaagggcct ggagtggatt ggatacatct attacagtgg gagcacctcc
180

tacaacccgt ccctcaagag tcgacttacc atgtcagtag acacgtctaa gaaccagttc
240
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ggatacagct atgccctctt tgactactgg ggccagggaa ccctggtcac cgtctcctca
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gctagcacca agggcccatc cgtcttcccc ctggcaccct cctccaagag cacctctggg
420

ggcacagcgg ccctgggctg cctggtcaag gactacttcc ccgaaccggt gacggtgtcg
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tggaactcag gcgccctgac cagcggcgtg cacaccttcc cggctgtcct acagtcctca
540

ggactctact ccctcagcag cgtggtgacc gtgccctcca gcagcttggg cacccagacc
600

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aaatcttgtg acaaaactca cacatgccca ccgtgcccag cacctgaact cctgggggga
720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggacccct
780

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1020

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1080

atgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc
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1200

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120

cagcacccag ggaagggcct ggagtggatt gggtacatct tttacagtgg gagcaccgac
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tacaacccgt ccctcaagag tcgagttacc atatcagtag acacgtctaa gaaccagttc
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420

ggcacagcgg ccctgggctg cctggtcaag gactacttcc ccgaaccggt gacggtgtcg
480

tggaactcag gcgccctgac cagcggcgtg cacaccttcc cggctgtcct acagtcctca
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600

tacatctgca acgtgaatca caagcccagc aacaccaagg tggacaagag agttgagccc
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aaatcttgtg acaaaactca cacatgccca ccgtgcccag cacctgaact cctgggggga
720

ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggaccccct
780

gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc ctgaggtcaa gttcaactgg
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900

agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc aggactggct gaatggcaag
960

gagtacaagt gcaaggtctc caacaaagcc ctcccagccc ccatcgagaa aaccatctcc
1020

aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggaggag
1080

atgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc
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1200

ctggactccg acggctcctt cttcctctat agcaagctca ccgtggacaa gagcaggtgg
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cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg
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<213> Homo sapiens

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120

ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaatactat
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gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat
240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gagagatgga
300

ggatatagtg gctacgattc ggggtttgac tactggggcc agggaaccct ggtcaccgtc
360

tcctcagcta gcaccaaggg cccatccgtc ttcccctgg caccctcctc caagagcacc
420

tctgggggca cagcggccct gggctgcctg gtcaaggact acttccccga accggtgacg
480

gtgtcgtgga actcaggcgc cctgaccagc ggcgtgcaca ccttcccggc tgtcctacag
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tcctcaggac tctactccct cagcagcgtg gtgaccgtgc cctccagcag cttgggcacc
600

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780

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1200

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<212> DNA
<213> Homo sapiens

<220>
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<223> Ab5 Heavy Chain-encoding nucleotide sequence

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120

actggacaag ggcttgagtg gatgggatgg atgaacccta acagtggtaa cacaggctat
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gcacagaagt tccagggcag agtcaccatg accaggaaca cctccataag cacagcctac
240

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acggtcaccg tctcctcagc tagcaccaag ggcccatccg tcttcccccct ggcaccctcc
420

tccaagagca cctctggggg cacagcggcc ctgggctgcc tggtcaagga ctacttcccc
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gaaccggtga cggtgtcgtg gaactcaggc gccctgacca gcggcgtgca caccttcccg
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1260

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<210> 7
<211> 1356
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab6 Heavy Chain-encoding nucleotide sequence

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120

cctggacaag ggcttgagtg gatgggatgg atcagcgctt acaatggtta cacacactat
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240

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1020

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1080

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1200

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1260

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<211> 1350
<212> DNA
<213> Homo sapiens

<220>
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<223> Ab7 Heavy Chain-encoding nucleotide sequence

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ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaatactat
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<210> 9
<211> 1356
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab8 Heavy Chain-encoding nucleotide sequence

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ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtga taaatacttt
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1320

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1356

<210> 10
<211> 450
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Heavy Chain amino acid sequence

<400> 10

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

Val 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 Ser Tyr Asn Pro Ser
50 55 60

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

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

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

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

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

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

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

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

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

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300
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Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335

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

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

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

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

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 11
<211> 450
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Heavy Chain amino acid sequence

<400> 11

```
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 Asp Ser Ile Ile 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 Phe Tyr Ser Gly Ser Thr Asp 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 Ser Gly Tyr Ser Tyr Ala Leu Phe Asp His Trp Gly Gln
            100                 105                 110

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

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

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

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

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

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

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255
```

```
Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335

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

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

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

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

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 12
<211> 452
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Heavy Chain amino acid sequence

<400> 12

```
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 Asn Tyr
            20                  25                  30

Gly Ile His 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 Gly Gly Tyr Ser Gly Tyr Asp Ser Gly Phe Asp Tyr Trp
            100                 105                 110

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

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

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

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

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

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

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

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                245                 250                 255

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

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

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

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

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

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

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
    370                 375                 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400

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

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430

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

Ser Pro Gly Lys
450

<210> 13
<211> 456
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Heavy Chain amino acid sequence

<400> 13

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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
35 40 45

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

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile 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 Tyr Asp Phe Trp Ser Gly Tyr Tyr Tyr Tyr Tyr Tyr Gly
100 105 110

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

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

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

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

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

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

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

Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
225                 230                 235                 240

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

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

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

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

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

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

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

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

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

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

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

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

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

Ser Leu Ser Leu Ser Pro Gly Lys
    450                 455
```

<210> 14
<211> 451
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Heavy Chain amino acid sequence

<400> 14

```
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 Tyr Thr His 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 Tyr Gly Gly Asn Asp Tyr Tyr Gly Met Asp Val Trp Gly
            100                 105                 110
```

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

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

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

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

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

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

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

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

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

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

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

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335

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

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

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

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

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

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

Pro Gly Lys
    450
```

<210> 15
<211> 450
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Heavy Chain amino acid sequence

<400> 15

```
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 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 Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Gly 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 Asn Ser His Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110

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

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

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

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

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

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

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

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
225                 230                 235                 240

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
                245                 250                 255

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
            260                 265                 270

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
        275                 280                 285

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
    290                 295                 300
```

```
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
305                 310                 315                 320

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
                325                 330                 335

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

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

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
    370                 375                 380

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
385                 390                 395                 400

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

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
            420                 425                 430

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
        435                 440                 445

Gly Lys
    450
```

<210> 16
<211> 452
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Heavy Chain amino acid sequence

<400> 16

```
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 Trp Tyr Asp Gly Ser Asp Lys Tyr Phe 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 Ile Ala Gly Ala Arg Tyr Val Tyr Phe Asp Tyr Trp
            100                 105                 110

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

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

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

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

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

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

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

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                245                 250                 255
```

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

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

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

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

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

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

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
    370                 375                 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400

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

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430

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

Ser Pro Gly Lys
    450
```

<210> 17
<211> 120
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Heavy Chain Variable Domain amino acid sequence

<400> 17

Gln Met 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 Asp Gly Ser Ile Ile Ser Gly
20 25 30

Val 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 Ser Tyr Asn Pro Ser
50 55 60

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

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 18
<211> 120
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Heavy Chain Variable Domain amino acid sequence

<400> 18

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 Asp Ser Ile Ile 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 Phe Tyr Ser Gly Ser Thr Asp 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 Ser Gly Tyr Ser Tyr Ala Leu Phe Asp His Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
```

<210> 19
<211> 120
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Heavy Chain Variable Domain amino acid sequence

<400> 19

```
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 Val Ile Ser Asp Ser Gly Gly Thr Thr Asp 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 His Asp Tyr Ser Asn Arg Tyr Tyr Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 20
<211> 122
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Heavy Chain Variable Domain amino acid sequence

<400> 20

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 Asn Tyr
20 25 30

Gly Ile His 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 Gly Gly Tyr Ser Gly Tyr Asp Ser Gly Phe Asp Tyr Trp
100 105 110

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

<210> 21
<211> 126

<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Heavy Chain Variable Domain amino acid sequence

<400> 21

```
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

Asp Ile Asn Trp Val Arg Gln Ala Thr Gly Gln Gly Leu Glu Trp Met
        35                  40                  45

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

Gln Gly Arg Val Thr Met Thr Arg Asn Thr Ser Ile 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 Tyr Asp Phe Trp Ser Gly Tyr Tyr Tyr Tyr Tyr Tyr Gly
            100                 105                 110

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

<210> 22
<211> 121
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Heavy Chain Variable Domain amino acid sequence

<400> 22

```
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 Tyr Thr His 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 Tyr Gly Gly Asn Asp Tyr Tyr Gly Met Asp Val Trp Gly
            100                 105                 110

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

<210> 23
<211> 120
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Heavy Chain Variable Domain amino acid sequence

<400> 23

```
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 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 Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Gly 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 Asn Ser His Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Thr Val Thr Val Ser Ser
        115                 120
```

<210> 24
<211> 122
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Heavy Chain Variable Domain amino acid sequence

<400> 24

```
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 Trp Tyr Asp Gly Ser Asp Lys Tyr Phe 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 Ile Ala Gly Ala Arg Tyr Val Tyr Phe Asp Tyr Trp
            100                 105                 110

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

<210> 25
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Heavy Chain CDR1 amino acid sequence

<400> 25

Ser Gly Val Tyr Tyr Trp Ser
1 5

<210> 26
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Heavy Chain CDR1 amino acid sequence

<400> 26

Ser Gly Gly Tyr Tyr Trp Ser
1 5

<210> 27
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Heavy Chain CDR1 amino acid sequence

<400> 27

Ser Tyr Ala Met Ser
1 5

<210> 28
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Heavy Chain CDR1 amino acid sequence

<400> 28

Asn Tyr Gly Ile His
1 5

<210> 29
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> SYDIN

<400> 29

Ser Tyr Asp Ile Asn
1 5

<210> 30
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Heavy Chain CDR1 amino acid sequence

<400> 30

Ser Tyr Gly Ile Ser
1 5

<210> 31
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Heavy Chain CDR1 amino acid sequence

<400> 31

Thr Tyr Gly Met His
1 5

<210> 32
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Heavy Chain CDR1 amino acid sequence

<400> 32

Ser Tyr Gly Met His
1 5

<210> 33
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Heavy Chain CDR2 amino acid sequence

<400> 33

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

<210> 34
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Heavy Chain CDR2 amino acid sequence

<400> 34

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

<210> 35
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Heavy Chain CDR2 amino acid sequence

<400> 35

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

Gly

<210> 36
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Heavy Chain CDR2 amino acid sequence

<400> 36

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

Gly

<210> 37
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Heavy Chain CDR2 amino acid sequence

<400> 37

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

Gly

<210> 38
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Heavy Chain CDR2 amino acid sequence

<400> 38

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

Gly

<210> 39
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Heavy Chain CDR2 amino acid sequence

<400> 39

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

Gly

<210> 40
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Heavy Chain CDR2 amino acid sequence

<400> 40

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

Gly

<210> 41
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Heavy Chain CDR3 amino acid sequence

<400> 41

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

<210> 42
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Heavy Chain CDR3 amino acid sequence

<400> 42

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

<210> 43
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Heavy Chain CDR3 amino acid sequence

<400> 43

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

<210> 44
<211> 13
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Heavy Chain CDR3 amino acid sequence

<400> 44

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

<210> 45
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> GYDFWSGYYYYYYGMDV

<400> 45

Gly Tyr Asp Phe Trp Ser Gly Tyr Tyr Tyr Tyr Tyr Tyr Gly Met Asp
1 5 10 15

Val

<210> 46
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Heavy Chain CDR3 amino acid sequence

<400> 46

Asp Tyr Gly Gly Asn Asp Tyr Tyr Gly Met Asp Val
1 5 10

<210> 47
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Heavy Chain CDR3 amino acid sequence

<400> 47

Asp Asn Ser His Tyr Tyr Tyr Gly Met Asp Val
1 5 10

<210> 48
<211> 13
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Heavy Chain CDR3 amino acid sequence

<400> 48

Asp Gly Ile Ala Gly Ala Arg Tyr Val Tyr Phe Asp Tyr
1 5 10

<210> 49
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab1 Light Chain-encoding nucleotide sequence

<400> 49
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctttaggaga cagagtcacc
60

atcacttgcc gggcaagtca gagcgttgac agatatttca attggtatca gcagaaacct
120

gggaaagccc ctaaggtcct gatctttgct gcatccagtt tgcaaagtgg ggtcccatca
180

aggttcggtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct
240

gaagattttg caacttacta ctgtcaacag agctacagta ccccgtggac gttcggccaa
300

gggaccaagg tggaagtcaa acgtacggtg gctgcaccat ctgtcttcat cttcccgcca
360

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat
420

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg taactcccag
480

gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg
540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc
600

ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt
642

<210> 50
<211> 642
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<223> Ab2 Light Chain-encoding nucleotide sequence

<400> 50
gacatccaga tgacccagtc cccatcctcc ctgtctgcat ctgtaggaga cagagtcacc
60

atcagttgcc gggcaagtca gttcattggc agatatttca attggtatca gcagcaacca
120

gggaaagccc ctaaggtcct gatctatgct gaatccagtt tgcaaagtgg ggtcccatca
180

agattcagtg gcagtggatc tgggacagaa ttcactctca ccatcagcag tctgcaacct
240

gaagattttg caagatacta ctgtcaacag agttacagta ccccgtggac gttcggccaa
300

gggaccaagg tggaaatcaa acgtacggtg gctgcaccat ctgtcttcat cttcccgcca
360

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat
420

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg taactcccag
480

gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg
540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc
600

ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt
642

<210> 51
<211> 660
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab4 Light Chain-encoding nucleotide sequence

<400> 51
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc
60

atctcctgca ggtctagtca gagcctcctg aatagtaatg gatacaacta tttggattgg
120

tacctgcaga agccagggca gtctccacag ttcctgatct atttgggttc ttatcgggcc
180

tccggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgagaatc
240

agcagagtgg aggctgagga tgttggggtt tattactgta tacaaactct acaaactcca
300

ttcactttcg gccctgggac caaagtggat atcaaacgta cggtggctgc accatctgtc
360

ttcatcttcc cgccatctga tgagcagttg aaatctggaa ctgcctctgt tgtgtgcctg
420

ctgaataact tctatcccag agaggccaaa gtacagtgga aggtggataa cgccctccaa
480

tcgggtaact cccaggagag tgtcacagag caggacagca aggacagcac ctacagcctc
540

agcagcaccc tgacgctgag caaagcagac tacgagaaac acaaagtcta cgcctgcgaa
600

gtcacccatc agggcctgag ctcgcccgtc acaaagagct tcaacagggg agagtgttag
660

<210> 52
<211> 651
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab5 Light Chain-encoding nucleotide sequence

<400> 52
gaaattgtgt tgacgcagtc tcctggcacc ctgtctttgt ctccagggga aagagccacc
60

ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaga
120

cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca
180

gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagtctggag
240

cctgaagatt ttgcagtgta ttactgtctg cagtctggta gctctgtccc gctcactttc
300

ggcggaggga ccaaggtgga gatcaaacgt acggtggctg caccatctgt cttcatcttc
360

ccgccatctg atgagcagtt gaaatctgga actgcctctg ttgtgtgcct gctgaataac
420

ttctatccca gagaggccaa agtacagtgg aaggtggata acgccctcca atcgggtaac
480

tcccaggaga gtgtcacaga gcaggacagc aaggacagca cctacagcct cagcagcacc
540

ctgacgctga gcaaagcaga ctacgagaaa cacaaagtct acgcctgcga agtcacccat
600

cagggcctga gctcgcccgt cacaaagagc ttcaacaggg gagagtgtta a
651

<210> 53
<211> 651
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab6 Light Chain-encoding nucleotide sequence

<400> 53
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc
60

tcttgttctg gaagcagctc caacatcgga attaattatg tatactggta ccagcagctc
120

ccaggaacgg cccccaaact cctcatctat aggagtgatc agcggccctc aggggtccct
180

gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccctcag tgggctccgg
240

tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgag tggtgtggtg
300

ttcggcggag ggaccaagct gaccgtccta ggccaaccga aagcggcgcc ctcggtcact
360

ctgttcccgc cctcctctga ggagcttcaa gccaacaagg ccacactggt gtgtctcata
420

agtgacttct acccgggagc cgtgacagtg gcctggaagg cagatagcag ccccgtcaag
480

gcgggagtgg agaccaccac accctccaaa caaagcaaca acaagtacgc ggccagcagc
540

tatctgagcc tgacgcctga gcagtggaag tcccacagaa gctacagctg ccaggtcacg
600

catgaaggga gcaccgtgga gaagacagtg gcccctacag aatgttcata g
651

<210> 54
<211> 651
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab7 Light Chain-encoding nucleotide sequence

<400> 54
cagtctgtgc tgacgcagcc gccctcagtg tctggggccc cagggcagag ggtcaccatc
60

tcctgcactg ggagcagctc caacatcggg gcaggttatg atgtaaattg gtatcagcag
120

ttcccaggaa cagcccccaa actcctcatc tatgttaaca acaatcggcc ctcaggagtc
180

cctgaccgat tctctggctc cacgtctggc acctcagcct ccctggccat cactggactc
240

caggctgagg atgaggctga ttattactgc cagtcctatg acaccagcct gagtgcttcg
300

gtattcggcg gagggaccag actgaccgtc ctaggccaac cgaaagcggc gccctcggtc
360

actctgttcc cgccctcctc tgaggagctt caagccaaca aggccacact ggtgtgtctc
420

ataagtgact tctacccggg agccgtgaca gtggcctgga aggcagatag cagccccgtc
480

aaggcgggag tggagaccac cacaccctcc aaacaaagca acaacaagta cgcggccagc
540

agctatctga gcctgacgcc tgagcagtgg aagtcccaca gaagctacag ctgccaggtc
600

acgcatgaag ggagcaccgt ggagaagaca gtggccccta cagaatgttc a
651

<210> 55
<211> 645
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Ab8 Light Chain-encoding nucleotide sequence

<400> 55
gacatccaga tgacccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc
60

atcacttgtc gggcgagtca gggcattagc aattatttag cctggtttca gcagaaacca
120

gggaaagccc ctaagtccct gatctatgct gcatccagtt tgcaaggtgg ggtcccatca
180

aagttcagcg gcagtggatc tgggacagat ttcactctca ccatcagcag cctgcagcct
240

gaagattttg caacttatta ctgccaacaa tattataatt acccattcac tttcggccct
300

gggaccacag tggatatcaa acgtacggtg gctgcaccat ctgtcttcat cttcccgcca
360

tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat
420

cccagagagg ccaaagtaca gtggaaggtg gataacgccc tccaatcggg taactcccag
480

gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg
540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc
600

ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gttag
645

<210> 56
<211> 214
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Light Chain amino acid sequence

<400> 56

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

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

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

Phe Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Gly 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 Ser Thr Pro Trp
                85                  90                  95

Thr Phe Gly Gln Gly Thr Lys Val Glu Val Lys Arg Thr Val Ala Ala
            100                 105                 110

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
    210

<210>  57
<211>  214
<212>  PRT
<213>  Homo sapiens

<220>
<221>  MISC_FEATURE
<223>  Ab2 Light Chain amino acid sequence

<400>  57

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 Ser Cys Arg Ala Ser Gln Phe Ile Gly Arg Tyr
            20                  25                  30

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

Tyr Ala Glu Ser Ser Leu Gln 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

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

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
    210
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<210> 58
<211> 219
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Light Chain amino acid sequence

<400> 58

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

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

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

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

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

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

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

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

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

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

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


<210>  59
<211>  216
<212>  PRT
<213>  Homo sapiens


<220>
<221>  MISC_FEATURE
<223>  Ab5 Light Chain amino acid sequence

<400>  59

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 Arg 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 Ser Leu Glu
65                  70                  75                  80


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


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


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


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


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


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

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

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

Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
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<210> 60
<211> 216
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Light Chain amino acid sequence

<400> 60

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

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

Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Ser Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
                85                  90                  95

Ser Gly Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
            100                 105                 110

Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu
        115                 120                 125
```

```
Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr
    130                 135                 140

Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys
145                 150                 155                 160

Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr
                165                 170                 175

Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His
            180                 185                 190

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

Thr Val Ala Pro Thr Glu Cys Ser
    210                 215
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<210> 61
<211> 217
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Light Chain amino acid sequence

<400> 61

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

Arg Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile Gly Ala Gly
            20                  25                  30

Tyr Asp Val Asn Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu
        35                  40                  45

Leu Ile Tyr Val Asn Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe
    50                  55                  60

Ser Gly Ser Thr Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu
65                  70                  75                  80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Thr Ser
                85                  90                  95
```

```
Leu Ser Ala Ser Val Phe Gly Gly Gly Thr Arg Leu Thr Val Leu Gly
            100                 105                 110

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

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

Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val
145                 150                 155                 160

Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys
                165                 170                 175

Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser
            180                 185                 190

His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu
        195                 200                 205

Lys Thr Val Ala Pro Thr Glu Cys Ser
    210                 215
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<210> 62
<211> 214
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Light Chain amino acid sequence

<400> 62

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

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

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

```
Tyr Ala Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Lys 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 Tyr Tyr Asn Tyr Pro Phe
                85                  90                  95

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
    210
```

<210> 63
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Light Chain Variable Domain amino acid sequence

<400> 63

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

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

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

Phe Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Gly 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 Ser Thr Pro Trp
                85                  90                  95

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

<210> 64
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Light Chain Variable Domain amino acid sequence

<400> 64

```
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 Ser Cys Arg Ala Ser Gln Phe Ile Gly Arg Tyr
            20                  25                  30

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

Tyr Ala Glu Ser Ser Leu Gln 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
```

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

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

<210> 65
<211> 108
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Light Chain Variable Domain amino acid sequence

<400> 65

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 Phe Ser Ser Asn
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Phe
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 Phe Cys Gln Gln Tyr Gly Ile Ser Pro
85 90 95

Cys Ser Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 66
<211> 112
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Light Chain Variable Domain amino acid sequence

<400> 66

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

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

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

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

<210> 67
<211> 109
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Light Chain Variable Domain amino acid sequence

<400> 67

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 Arg 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 Ser Leu Glu
65                  70                  75                  80

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

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

<210>  68
<211>  110
<212>  PRT
<213>  Homo sapiens

<220>
<221>  MISC_FEATURE
<223>  Ab6 Light Chain Variable Domain amino acid sequence

<400>  68

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

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

Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Ser Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
    50                  55                  60

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

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
                85                  90                  95

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

<210>  69
<211>  111
<212>  PRT
<213>  Homo sapiens
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<220>
<221> MISC_FEATURE
<223> Ab7 Light Chain Variable Domain amino acid sequence

<400> 69

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

Arg Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile Gly Ala Gly
20 25 30

Tyr Asp Val Asn Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu
35 40 45

Leu Ile Tyr Val Asn Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe
50 55 60

Ser Gly Ser Thr Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Thr Ser
85 90 95

Leu Ser Ala Ser Val Phe Gly Gly Gly Thr Arg Leu Thr Val Leu
100 105 110

<210> 70
<211> 107
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Light Chain Variable Domain amino acid sequence

<400> 70

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 Gly Ile Ser Asn Tyr
20 25 30

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

```
Tyr Ala Ala Ser Ser Leu Gln Gly Gly Val Pro Ser Lys 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 Tyr Tyr Asn Tyr Pro Phe
                85                  90                  95

Thr Phe Gly Pro Gly Thr Thr Val Asp Ile Lys
            100                 105
```

<210> 71
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Light Chain CDR1 amino acid sequence

<400> 71

```
Arg Ala Ser Gln Ser Val Asp Arg Tyr Phe Asn
1               5                   10
```

<210> 72
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Light Chain CDR1 amino acid sequence

<400> 72

```
Arg Ala Ser Gln Phe Ile Gly Arg Tyr Phe Asn
1               5                   10
```

<210> 73
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Light Chain CDR1 amino acid sequence

<400> 73

Arg Ala Ser Gln Ser Phe Ser Ser Asn Tyr Leu Ala
1 5 10

<210> 74
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Light Chain CDR1 amino acid sequence

<400> 74

Arg Ser Ser Gln Ser Leu Leu Asn Ser Asn Gly Tyr Asn Tyr Leu Asp
1 5 10 15

<210> 75
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Light Chain CDR1 amino acid sequence

<400> 75

Arg Ala Ser Gln Ser Val Ser Ser Ser Tyr Leu Ala
1 5 10

<210> 76
<211> 13
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Light Chain CDR1 amino acid sequence

<400> 76

Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn Tyr Val Tyr
1 5 10

<210> 77
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Light Chain CDR1 amino acid sequence

<400> 77

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

<210> 78
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Light Chain CDR1 amino acid sequence

<400> 78

Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala
1 5 10

<210> 79
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Light Chain CDR2 amino acid sequence

<400> 79

Ala Ala Ser Ser Leu Gln Ser
1 5

<210> 80
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Light Chain CDR2 amino acid sequence

<400> 80

Ala Glu Ser Ser Leu Gln Ser
1 5

<210> 81
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Light Chain CDR2 amino acid sequence

<400> 81

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 82
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Light Chain CDR2 amino acid sequence

<400> 82

Leu Gly Ser Tyr Arg Ala Ser
1 5

<210> 83
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Light Chain CDR2 amino acid sequence

<400> 83

Gly Ala Ser Ser Arg Ala Thr
1 5

<210> 84
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE

<223> Ab6 Light Chain CDR2 amino acid sequence

<400> 84

Arg Ser Asp Gln Arg Pro Ser
1 5

<210> 85
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Light Chain CDR2 amino acid sequence

<400> 85

Val Asn Asn Asn Arg Pro Ser
1 5

<210> 86
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Light Chain CDR2 amino acid sequence

<400> 86

Ala Ala Ser Ser Leu Gln Gly
1 5

<210> 87
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab1 Light Chain CDR3 amino acid sequence

<400> 87

Gln Gln Ser Tyr Ser Thr Pro Trp Thr
1 5

<210> 88
<211> 9

<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab2 Light Chain CDR3 amino acid sequence

<400> 88

Gln Gln Ser Tyr Ser Thr Pro Trp Thr
1 5

<210> 89
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab3 Light Chain CDR3 amino acid sequence

<400> 89

Gln Gln Tyr Gly Ile Ser Pro Cys Ser
1 5

<210> 90
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab4 Light Chain CDR3 amino acid sequence

<400> 90

Ile Gln Thr Leu Gln Thr Pro Phe Thr
1 5

<210> 91
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab5 Light Chain CDR3 amino acid sequence

<400> 91

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

<210> 92
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab6 Light Chain CDR3 amino acid sequence

<400> 92

Ala Ala Trp Asp Asp Ser Leu Ser Gly Val Val
1 5 10

<210> 93
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab7 Light Chain CDR3 amino acid sequence

<400> 93

Gln Ser Tyr Asp Thr Ser Leu Ser Ala Ser Val
1 5 10

<210> 94
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<223> Ab8 Light Chain CDR3 amino acid sequence

<400> 94

Gln Gln Tyr Tyr Asn Tyr Pro Phe Thr
1 5