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<120> Antibody Formulation

<130> PAT055113

<150> US 61/642644
<151> 2012-05-04

<160> 21

<170> PatentIn version 3.5

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<213> Homo sapiens

<400> 1

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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 Glu Glu Ser Asn Arg Tyr His Ala Asp Ser Val
    50                  55                  60


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


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


Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro Asp Tyr Trp Gly Gln
            100                 105                 110


Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<213> Homo sapiens

<400> 2

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Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr 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
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Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45


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


<210>  3
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<212>  PRT
<213>  Homo sapiens

<400>  3

Ser Tyr Gly Met His
1               5


<210>  4
<211>  17
<212>  PRT
<213>  Homo sapiens

<400>  4

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


Gly



<210>  5
<211>  11
<212>  PRT
<213>  Homo sapiens

<400>  5

Asp Gly Gly Ile Ala Ala Pro Gly Pro Asp Tyr
1               5                   10


<210>  6
<211>  16
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<213>  Homo sapiens

<400>  6

Arg Ser Ser Gln Ser Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Leu Asp
1               5                   10                  15
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<210> 7
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<213> Homo sapiens

<400> 7

Leu Gly Ser Asn Arg Ala Ser
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<210> 8
<211> 9
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<213> Homo sapiens

<400> 8

Met Gln Ala Arg Gln Thr Pro Phe Thr
1 5

<210> 9
<211> 450
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<213> Homo sapiens

<400> 9

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 Glu Glu Ser Asn Arg Tyr His Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro 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 Ala 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
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Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
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Gly Lys
    450


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

<400>  10

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr 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 Ser 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 Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Arg
            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
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<210> 11
<211> 1350
<212> DNA
<213> Homo sapiens

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tcttgcgccg cctccggctt caccttctcc agctacggca tgcactgggt gcgacaggcc 120

cctggcaagg gactggaatg ggtggccgtg atctcctacg aggaatccaa cagataccac 180

gctgactccg tgaagggccg gttcacaatc tcccgggaca actccaagat caccctgtac 240

ctgcagatga actccctgcg gaccgaggac accgccgtgt actactgcgc cagggacgga 300

ggaatcgccg ctcctggacc tgattattgg ggccagggca ccctggtgac agtgtcctcc 360

gctagcacca agggcccctc cgtgttccct ctggcccccc ccagcaagtc cacctctggc 420

ggcaccgccg ctctgggctg cctggtgaaa gactacttcc ccgagcccgt gaccgtgtcc 480

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tacatctgca acgtgaacca caagccctcc aacaccaagg tggacaagcg ggtggaaccc 660

aagtcctgcg acaagaccca cacctgtccc ccctgccctg cccctgaact gctgggcgga 720

ccttccgtgt tcctgttccc cccaaagccc aaggacaccc tgatgatctc ccggaccccc 780

gaagtgacct gcgtggtggt ggacgtgtcc cacgaggacc ctgaagtgaa gttcaattgg 840

tacgtggacg gcgtggaagt gcacaacgcc aagaccaagc ccagagagga acagtacgcc 900

tccacctacc gggtggtgtc tgtgctgacc gtgctgcacc aggactggct gaacggcaaa 960

gagtacaagt gcaaggtctc caacaaggcc ctgcctgccc ccatcgaaaa gaccatctcc 1020

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atgaccaaga accaggtgtc cctgacctgt ctggtcaaag gcttctaccc ctccgatatc 1140

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cagaagtccc tgtccctgag ccccggcaag 1350

<210> 12
<211> 657
<212> DNA
<213> Homo sapiens

<400> 12
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tatctgcaga agcccggcca gtccccacag gtgctgatct ccctgggctc caacagagcc 180

tctggcgtgc ccgaccggtt ctccggctct ggctctggca ccgacttcac actgaagatc 240

tcacgggtgg aagccgagga cgtgggcgtg tactactgca tgcaggcccg gcagaccccc 300

ttcaccttcg gccctggcac caaggtggac atccggcgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagcggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 13
<211> 450
<212> PRT
<213> Homo sapiens

<400> 13

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 Glu Glu Ser Asn Arg Tyr His Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro 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 Ala 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
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Gly Lys
    450

<210> 14
<211> 219
<212> PRT
<213> Homo sapiens

<400> 14

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr 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 Ser 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 Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Arg
            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

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

<210> 15
<211> 1350
<212> DNA
<213> Homo sapiens

<400> 15
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tcttgcgccg cctccggctt caccttctcc agctacggca tgcactgggt gcgacaggcc 120

cctggcaagg gactggaatg ggtggccgtg atctcctacg aggaatccaa cagataccac 180

gctgactccg tgaagggccg gttcacaatc tcccgggaca actccaagat caccctgtac 240

ctgcagatga actccctgcg gaccgaggac accgccgtgt actactgcgc cagggacgga 300

ggaatcgccg ctcctggacc tgattattgg ggccagggca ccctggtgac agtgtcctcc 360

gctagcacca agggcccctc cgtgttccct ctggcccccc ccagcaagtc cacctctggc 420

ggcaccgccg ctctgggctg cctggtgaaa gactacttcc ccgagcccgt gaccgtgtcc 480

tggaactctg gcgccctgac ctccggcgtg cacacctttc cagccgtgct gcagtcctcc 540

ggcctgtact ccctgtcctc cgtggtgacc gtgccctcta gctctctggg cacccagacc 600

tacatctgca acgtgaacca caagccctcc aacaccaagg tggacaagcg ggtggaaccc 660

aagtcctgcg acaagaccca cacctgtccc ccctgccctg cccctgaact gctgggcgga 720

ccttccgtgt tcctgttccc cccaaagccc aaggacaccc tgatgatctc ccggacccca 780

gaagtgacct gcgtggtggt ggccgtgtcc cacgaggacc ctgaagtgaa gttcaattgg 840

tacgtggacg gcgtggaagt gcacaacgcc aagaccaagc ccagagagga acagtacaac 900

tccacctacc gggtggtgtc tgtgctgacc gtgctgcacc aggactggct gaacggcaaa 960

gagtacaagt gcaaggtctc caacaaggcc ctgcctgccc ccatcgaaaa gaccatctcc 1020

aaggccaagg gccagccccg cgagccacag gtgtacacac tgcccccag ccgggaagag 1080

atgaccaaga accaggtgtc cctgacctgt ctggtcaaag gcttctaccc ctccgatatc 1140

gccgtggagt gggagtccaa cggacagccc gagaacaact acaagaccac ccccccctgtg 1200

ctggactccg acggctcatt cttcctgtac tccaagctga ccgtggacaa gtcccggtgg 1260

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cagaagtccc tgtccctgag ccccggcaag 1350

<210> 16
<211> 657
<212> DNA
<213> Homo sapiens

<400> 16
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atctcctgca gatcctccca gtccctgctg tactccaacg gctacaacta cctggactgg 120

tatctgcaga agcccggcca gtccccacag gtgctgatct ccctgggctc caacagagcc 180

tctggcgtgc ccgaccggtt ctccggctct ggctctggca ccgacttcac actgaagatc 240

tcacgggtgg aagccgagga cgtgggcgtg tactactgca tgcaggcccg gcagaccccc 300

ttcaccttcg gccctggcac caaggtggac atccggcgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagcggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 17
<211> 450
<212> PRT
<213> Homo sapiens

<400> 17

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 Glu Glu Ser Asn Arg Tyr His Ala Asp Ser Val
50 55 60

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

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

Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro 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 Ala Ala 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
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<210> 18
<211> 219
<212> PRT
<213> Homo sapiens

<400> 18

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Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr 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 Ser 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 Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Arg
            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

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
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<210> 19
<211> 1350
<212> DNA

<213> Homo sapiens

<400> 19
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gctagcacca agggcccctc cgtgttccct ctggcccctt ccagcaagtc tacctccggc 420

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ggcctgtact ccctgtcctc cgtggtcaca gtgccttcaa gcagcctggg cacccagacc 600

tatatctgca acgtgaacca caagccttcc aacaccaagg tggacaagcg ggtggagcct 660

aagtcctgcg acaagaccca cacctgtcct ccctgccctg ctcctgaagc tgctggcggc 720

ccttctgtgt tcctgttccc tccaaagccc aaggacaccc tgatgatctc ccggacccct 780

gaagtgacct gcgtggtggt ggacgtgtcc cacgaggatc ctgaagtgaa gttcaattgg 840

tacgtggacg gcgtggaggt gcacaacgcc aagaccaagc ctcgggagga acagtacaac 900

tccacctacc gggtggtgtc cgtgctgacc gtgctgcacc aggactggct gaacggcaaa 960

gagtacaagt gcaaagtctc caacaaggcc ctgcctgccc ctatcgaaaa gacaatctcc 1020

aaggccaagg gccagcctag ggaaccccag gtgtacaccc tgccacccag ccgggaggaa 1080

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35 40 45

Ser Asp Cys Thr Glu Phe Thr Glu Thr Glu Cys Leu Pro Cys Gly Glu
50 55 60

Ser Glu Phe Leu Asp Thr Trp Asn Arg Glu Thr His Cys His Gln His
65 70 75 80

Lys Tyr Cys Asp Pro Asn Leu Gly Leu Arg Val Gln Gln Lys Gly Thr
85 90 95

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