SEQUENCE LISTING

<110> Human Genome Sciences, Inc.

<120> METHODS AND COMPOSITIONS FOR USE IN TREATMENT OF PATIENTS WITH AUTOANTIBODY POSITIVE DISEASE

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<170> PatentIn version 3.3

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ccaaccttca aagttcaagt agtgat atg gat gac tcc aca gaa agg gag cag 173
Met Asp Asp Ser Thr Glu Arg Glu Gln
1 5

tca cgc ctt act tct tgc ctt aag aaa aga gaa gaa atg aaa ctg aag 221
Ser Arg Leu Thr Ser Cys Leu Lys Lys Arg Glu Glu Met Lys Leu Lys
10 15 20 25

gag tgt gtt tcc atc ctc cca cgg aag gaa agc ccc tct gtc cga tcc 269
Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser
30 35 40

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tcc aaa gac gga aag ctg ctg gct gca acc ttg ctg ctg gca ctg ctg      317
Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu
          45                  50                  55

tct tgc tgc ctc acg gtg gtg tct ttc tac cag gtg gcc gcc ctg caa      365
Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln
        60                  65                  70

ggg gac ctg gcc agc ctc cgg gca gag ctg cag ggc cac cac gcg gag      413
Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu
    75                  80                  85

aag ctg cca gca gga gca gga gcc ccc aag gcc ggc ctg gag gaa gct      461
Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala
90                  95                  100                 105

cca gct gtc acc gcg gga ctg aaa atc ttt gaa cca cca gct cca gga      509
Pro Ala Val Thr Ala Gly Leu Lys Ile Phe Glu Pro Pro Ala Pro Gly
                110                 115                 120

gaa ggc aac tcc agt cag aac agc aga aat aag cgt gcc gtt cag ggt      557
Glu Gly Asn Ser Ser Gln Asn Ser Arg Asn Lys Arg Ala Val Gln Gly
            125                 130                 135

cca gaa gaa aca gtc act caa gac tgc ttg caa ctg att gca gac agt      605
Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser
        140                 145                 150

gaa aca cca act ata caa aaa gga tct tac aca ttt gtt cca tgg ctt      653
Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu
    155                 160                 165

ctc agc ttt aaa agg gga agt gcc cta gaa gaa aaa gag aat aaa ata      701
Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile
170                 175                 180                 185

ttg gtc aaa gaa act ggt tac ttt ttt ata tat ggt cag gtt tta tat      749
Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr Gly Gln Val Leu Tyr
                190                 195                 200

act gat aag acc tac gcc atg gga cat cta att cag agg aag aag gtc      797
Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val
            205                 210                 215

cat gtc ttt ggg gat gaa ttg agt ctg gtg act ttg ttt cga tgt att      845
His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys Ile
        220                 225                 230

caa aat atg cct gaa aca cta ccc aat aat tcc tgc tat tca gct ggc      893
Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala Gly
    235                 240                 245

att gca aaa ctg gaa gaa gga gat gaa ctc caa ctt gca ata cca aga      941
Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg
250                 255                 260                 265

gaa aat gca caa ata tca ctg gat gga gat gtc aca ttt ttt ggt gca      989
Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val Thr Phe Phe Gly Ala
                270                 275                 280

ttg aaa ctg ctg tgacctactt acaccatgtc tgtagctatt ttcctccctt         1041
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Leu Lys Leu Leu
285

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Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
20 25 30

Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
35 40 45

Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
50 55 60

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

Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
85 90 95

Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
100 105 110

Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
115 120 125

Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
130 135 140

Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
145 150 155 160

Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
165 170 175

Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
180 185 190

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Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
        195                 200                 205

Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
    210                 215                 220

Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
225                 230                 235                 240

Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
                245                 250                 255

Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
            260                 265                 270

Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
        275                 280                 285
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gctttcctcc tccctccttt tttattttca agttcctttt tatttctcct tgcgtaacaa    180

ccttcttccc ttctgcacca ctgcccgtac ccttacccgc gccgccacct ccttgctaca    240

ccactcttga aaccacagct gttggcaggg tcccccagct c atg cca gcc tca tct    296
                                                Met Pro Ala Ser Ser
                                                1               5

cct ttc ttg cta gcc ccc aaa ggg cct cca ggc aac atg ggg ggc cca      344
Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro Gly Asn Met Gly Gly Pro
                10                  15                  20

gtc aga gag ccg gca ctc tca gtt gcc ctc tgg ttg agt tgg ggg gca      392
Val Arg Glu Pro Ala Leu Ser Val Ala Leu Trp Leu Ser Trp Gly Ala
            25                  30                  35

gct ctg ggg gcc gtg gct tgt gcc atg gct ctg ctg acc caa caa aca      440
Ala Leu Gly Ala Val Ala Cys Ala Met Ala Leu Leu Thr Gln Gln Thr
        40                  45                  50

gag ctg cag agc ctc agg aga gag gtg agc cgg ctg cag agg aca gga      488
Glu Leu Gln Ser Leu Arg Arg Glu Val Ser Arg Leu Gln Arg Thr Gly
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    55                  60                  65

ggc ccc tcc cag aat ggg gaa ggg tat ccc tgg cag agt ctc ccg gag      536
Gly Pro Ser Gln Asn Gly Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu
70                  75                  80                  85

cag agt tcc gat gcc ctg gaa gcc tgg gag aat ggg gag aga tcc cgg      584
Gln Ser Ser Asp Ala Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg
                90                  95                  100

aaa agg aga gca gtg ctc acc caa aaa cag aag aag cag cac tct gtc      632
Lys Arg Arg Ala Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val
            105                 110                 115

ctg cac ctg gtt ccc att aac gcc acc tcc aag gat gac tcc gat gtg      680
Leu His Leu Val Pro Ile Asn Ala Thr Ser Lys Asp Asp Ser Asp Val
        120                 125                 130

aca gag gtg atg tgg caa cca gct ctt agg cgt ggg aga ggc cta cag      728
Thr Glu Val Met Trp Gln Pro Ala Leu Arg Arg Gly Arg Gly Leu Gln
    135                 140                 145

gcc caa gga tat ggt gtc cga atc cag gat gct gga gtt tat ctg ctg      776
Ala Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala Gly Val Tyr Leu Leu
150                 155                 160                 165

tat agc cag gtc ctg ttt caa gac gtg act ttc acc atg ggt cag gtg      824
Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met Gly Gln Val
                170                 175                 180

gtg tct cga gaa ggc caa gga agg cag gag act cta ttc cga tgt ata      872
Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe Arg Cys Ile
            185                 190                 195

aga agt atg ccc tcc cac ccg gac cgg gcc tac aac agc tgc tat agc      920
Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser Cys Tyr Ser
        200                 205                 210

gca ggt gtc ttc cat tta cac caa ggg gat att ctg agt gtc ata att      968
Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu Ser Val Ile Ile
    215                 220                 225

ccc cgg gca agg gcg aaa ctt aac ctc tct cca cat gga acc ttc ctg     1016
Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro His Gly Thr Phe Leu
230                 235                 240                 245

ggg ttt gtg aaa ctg tga ttgtgttata aaaagtggct cccagcttgg            1064
Gly Phe Val Lys Leu
                250

aagaccaggg tgggtacata ctggagacag ccaagagctg agtatataaa ggagagggaa   1124

tgtgcaggaa cagaggcgtc ttcctgggtt tggctccccg ttcctcactt ttccctttc    1184

attcccaccc cctagacttt gattttacgg atatcttgct tctgttcccc atggagctcc   1244

gaattcttgc gtgtgtgtag atgaggggcg ggggacgggc gccaggcatt gtccagacct   1304

ggtcggggcc cactggaagc atccagaaca gcaccaccat ctagcggccg ctctagagga   1364

tccctcgagg ggcccaagct tacgcgtgca tgcgacgtca tagctctctc cctatagtga   1424
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gtcgtattat aagctagctt gggatctttg tgaaggaacc ttacttctgt ggtgtgacat 1484

aattggacaa actacctaca gagatttaaa gctctaaggt aaatataaaa tttttaagtg 1544

tataatgtgt taaactagct gcatatgctt gctgcttgag agtttggctt actgagtatg 1604

attatgaaaa tattatacac aggagctagt gatctatgtt ggttttagat caagccaagg 1664

tcattcaggc ctcagctcaa gctgtcatga tcatatcagc atacaattgt gag 1717

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Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala Leu Trp
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Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala Met Ala Leu
35 40 45

Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg Glu Val Ser Arg
50 55 60

Leu Gln Arg Thr Gly Gly Pro Ser Gln Asn Gly Glu Gly Tyr Pro Trp
65 70 75 80

Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala Leu Glu Ala Trp Glu Asn
85 90 95

Gly Glu Arg Ser Arg Lys Arg Arg Ala Val Leu Thr Gln Lys Gln Lys
100 105 110

Lys Gln His Ser Val Leu His Leu Val Pro Ile Asn Ala Thr Ser Lys
115 120 125

Asp Asp Ser Asp Val Thr Glu Val Met Trp Gln Pro Ala Leu Arg Arg
130 135 140

Gly Arg Gly Leu Gln Ala Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala
145 150 155 160

Gly Val Tyr Leu Leu Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe
165 170 175

```
Thr Met Gly Gln Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr
            180                 185                 190

Leu Phe Arg Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr
        195                 200                 205

Asn Ser Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile
    210                 215                 220

Leu Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro
225                 230                 235                 240

His Gly Thr Phe Leu Gly Phe Val Lys Leu
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1               5                   10                  15

cag gag gag cgc ttt cca cag ggc ctg tgg acg ggg gtg gct atg aga       96
Gln Glu Glu Arg Phe Pro Gln Gly Leu Trp Thr Gly Val Ala Met Arg
            20                  25                  30

tcc tgc ccc gaa gag cag tac tgg gat cct ctg ctg ggt acc tgc atg      144
Ser Cys Pro Glu Glu Gln Tyr Trp Asp Pro Leu Leu Gly Thr Cys Met
        35                  40                  45

tcc tgc aaa acc att tgc aac cat cag agc cag cgc acc tgt gca gcc      192
Ser Cys Lys Thr Ile Cys Asn His Gln Ser Gln Arg Thr Cys Ala Ala
    50                  55                  60

ttc tgc agg tca ctc agc tgc cgc aag gag caa ggc aag ttc tat gac      240
Phe Cys Arg Ser Leu Ser Cys Arg Lys Glu Gln Gly Lys Phe Tyr Asp
65                  70                  75                  80

cat ctc ctg agg gac tgc atc agc tgt gcc tcc atc tgt gga cag cac      288
His Leu Leu Arg Asp Cys Ile Ser Cys Ala Ser Ile Cys Gly Gln His
                85                  90                  95

cct aag caa tgt gca tac ttc tgt gag aac aag ctc agg agc cca gtg      336
Pro Lys Gln Cys Ala Tyr Phe Cys Glu Asn Lys Leu Arg Ser Pro Val
            100                 105                 110
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aac ctt cca cca gag ctc agg aga cag cgg agt gga gaa gtt gaa aac      384
Asn Leu Pro Pro Glu Leu Arg Arg Gln Arg Ser Gly Glu Val Glu Asn
        115                 120                 125

aat tca gac aac tcg gga agg tac caa gga ttg gag cac aga ggc tca      432
Asn Ser Asp Asn Ser Gly Arg Tyr Gln Gly Leu Glu His Arg Gly Ser
    130                 135                 140

gaa gca agt cca gct ctc ccg ggg ctg aag ctg agt gca gat cag gtg      480
Glu Ala Ser Pro Ala Leu Pro Gly Leu Lys Leu Ser Ala Asp Gln Val
145                 150                 155                 160

gcc ctg gtc tac agc acg ctg ggg ctc tgc ctg tgt gcc gtc ctc tgc      528
Ala Leu Val Tyr Ser Thr Leu Gly Leu Cys Leu Cys Ala Val Leu Cys
                165                 170                 175

tgc ttc ctg gtg gcg gtg gcc tgc ttc ctc aag aag agg ggg gat ccc      576
Cys Phe Leu Val Ala Val Ala Cys Phe Leu Lys Lys Arg Gly Asp Pro
            180                 185                 190

tgc tcc tgc cag ccc cgc tca agg ccc cgt caa agt ccg gcc aag tct      624
Cys Ser Cys Gln Pro Arg Ser Arg Pro Arg Gln Ser Pro Ala Lys Ser
        195                 200                 205

tcc cag gat cac gcg atg gaa gcc ggc agc cct gtg agc aca tcc ccc      672
Ser Gln Asp His Ala Met Glu Ala Gly Ser Pro Val Ser Thr Ser Pro
    210                 215                 220

gag cca gtg gag acc tgc agc ttc tgc ttc cct gag tgc agg gcg ccc      720
Glu Pro Val Glu Thr Cys Ser Phe Cys Phe Pro Glu Cys Arg Ala Pro
225                 230                 235                 240

acg cag gag agc gca gtc acg cct ggg acc ccc gac ccc act tgt gct      768
Thr Gln Glu Ser Ala Val Thr Pro Gly Thr Pro Asp Pro Thr Cys Ala
                245                 250                 255

gga agg tgg ggg tgc cac acc agg acc aca gtc ctg cag cct tgc cca      816
Gly Arg Trp Gly Cys His Thr Arg Thr Thr Val Leu Gln Pro Cys Pro
            260                 265                 270

cac atc cca gac agt ggc ctt ggc att gtg tgt gtg cct gcc cag gag      864
His Ile Pro Asp Ser Gly Leu Gly Ile Val Cys Val Pro Ala Gln Glu
        275                 280                 285

ggg ggc cca ggt gca taa                                             882
Gly Gly Pro Gly Ala
    290
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Gln Glu Glu Arg Phe Pro Gln Gly Leu Trp Thr Gly Val Ala Met Arg
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            20                  25                  30

Ser Cys Pro Glu Glu Gln Tyr Trp Asp Pro Leu Leu Gly Thr Cys Met
        35                  40                  45

Ser Cys Lys Thr Ile Cys Asn His Gln Ser Gln Arg Thr Cys Ala Ala
    50                  55                  60

Phe Cys Arg Ser Leu Ser Cys Arg Lys Glu Gln Gly Lys Phe Tyr Asp
65                  70                  75                  80

His Leu Leu Arg Asp Cys Ile Ser Cys Ala Ser Ile Cys Gly Gln His
                85                  90                  95

Pro Lys Gln Cys Ala Tyr Phe Cys Glu Asn Lys Leu Arg Ser Pro Val
            100                 105                 110

Asn Leu Pro Pro Glu Leu Arg Arg Gln Arg Ser Gly Glu Val Glu Asn
        115                 120                 125

Asn Ser Asp Asn Ser Gly Arg Tyr Gln Gly Leu Glu His Arg Gly Ser
    130                 135                 140

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

Ala Leu Val Tyr Ser Thr Leu Gly Leu Cys Leu Cys Ala Val Leu Cys
                165                 170                 175

Cys Phe Leu Val Ala Val Ala Cys Phe Leu Lys Lys Arg Gly Asp Pro
            180                 185                 190

Cys Ser Cys Gln Pro Arg Ser Arg Pro Arg Gln Ser Pro Ala Lys Ser
        195                 200                 205

Ser Gln Asp His Ala Met Glu Ala Gly Ser Pro Val Ser Thr Ser Pro
    210                 215                 220

Glu Pro Val Glu Thr Cys Ser Phe Cys Phe Pro Glu Cys Arg Ala Pro
225                 230                 235                 240

Thr Gln Glu Ser Ala Val Thr Pro Gly Thr Pro Asp Pro Thr Cys Ala
                245                 250                 255

Gly Arg Trp Gly Cys His Thr Arg Thr Thr Val Leu Gln Pro Cys Pro
            260                 265                 270
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His Ile Pro Asp Ser Gly Leu Gly Ile Val Cys Val Pro Ala Gln Glu
        275                 280                 285


Gly Gly Pro Gly Ala
    290


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<212>  DNA
<213>  Homo sapiens


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<222>  (67)..(621)

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       Met Leu Gln Met Ala Gly Gln Cys Ser Gln Asn Glu Tyr Phe
       1               5                   10

gac agt ttg ttg cat gct tgc ata cct tgt caa ctt cga tgt tct tct      156
Asp Ser Leu Leu His Ala Cys Ile Pro Cys Gln Leu Arg Cys Ser Ser
15                  20                  25                  30

aat act cct cct cta aca tgt cag cgt tat tgt aat gca agt gtg acc      204
Asn Thr Pro Pro Leu Thr Cys Gln Arg Tyr Cys Asn Ala Ser Val Thr
                35                  40                  45

aat tca gtg aaa gga acg aat gcg att ctc tgg acc tgt ttg gga ctg      252
Asn Ser Val Lys Gly Thr Asn Ala Ile Leu Trp Thr Cys Leu Gly Leu
            50                  55                  60

agc tta ata att tct ttg gca gtt ttc gtg cta atg ttt ttg cta agg      300
Ser Leu Ile Ile Ser Leu Ala Val Phe Val Leu Met Phe Leu Leu Arg
        65                  70                  75

aag ata agc tct gaa cca tta aag gac gag ttt aaa aac aca gga tca      348
Lys Ile Ser Ser Glu Pro Leu Lys Asp Glu Phe Lys Asn Thr Gly Ser
    80                  85                  90

ggt ctc ctg ggc atg gct aac att gac ctg gaa aag agc agg act ggt      396
Gly Leu Leu Gly Met Ala Asn Ile Asp Leu Glu Lys Ser Arg Thr Gly
95                  100                 105                 110

gat gaa att att ctt ccg aga ggc ctc gag tac acg gtg gaa gaa tgc      444
Asp Glu Ile Ile Leu Pro Arg Gly Leu Glu Tyr Thr Val Glu Glu Cys
                115                 120                 125

acc tgt gaa gac tgc atc aag agc aaa ccg aag gtc gac tct gac cat      492
Thr Cys Glu Asp Cys Ile Lys Ser Lys Pro Lys Val Asp Ser Asp His
            130                 135                 140

tgc ttt cca ctc cca gct atg gag gaa ggc gca acc att ctt gtc acc      540
Cys Phe Pro Leu Pro Ala Met Glu Glu Gly Ala Thr Ile Leu Val Thr
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```
        145                 150                 155

acg aaa acg aat gac tat tgc aag agc ctg cca gct gct ttg agt gct      588
Thr Lys Thr Asn Asp Tyr Cys Lys Ser Leu Pro Ala Ala Leu Ser Ala
    160                 165                 170

acg gag ata gag aaa tca att tct gct agg taa ttaaccattt cgactcgagc    641
Thr Glu Ile Glu Lys Ser Ile Ser Ala Arg
175                 180

agtgccactt taaaaatctt ttgtcagaat agatgatgtg tcagatctct ttaggatgac    701

tgtatttttc agttgccgat acagcttttt gtcctctaac tgtggaaact ctttatgtta    761

gatatatttc tctaggttac tgttgggagc ttaatggtag aaacttcctt ggtttctatg    821

attaaagtct ttt                                                       834
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<213> Homo sapiens

<400> 8

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

Pro Pro Leu Thr Cys Gln Arg Tyr Cys Asn Ala Ser Val Thr Asn Ser
        35                  40                  45

Val Lys Gly Thr Asn Ala Ile Leu Trp Thr Cys Leu Gly Leu Ser Leu
    50                  55                  60

Ile Ile Ser Leu Ala Val Phe Val Leu Met Phe Leu Leu Arg Lys Ile
65                  70                  75                  80

Ser Ser Glu Pro Leu Lys Asp Glu Phe Lys Asn Thr Gly Ser Gly Leu
                85                  90                  95

Leu Gly Met Ala Asn Ile Asp Leu Glu Lys Ser Arg Thr Gly Asp Glu
            100                 105                 110

Ile Ile Leu Pro Arg Gly Leu Glu Tyr Thr Val Glu Glu Cys Thr Cys
        115                 120                 125

Glu Asp Cys Ile Lys Ser Lys Pro Lys Val Asp Ser Asp His Cys Phe
    130                 135                 140
```

```
Pro Leu Pro Ala Met Glu Glu Gly Ala Thr Ile Leu Val Thr Thr Lys
145                 150                 155                 160

Thr Asn Asp Tyr Cys Lys Ser Leu Pro Ala Ala Leu Ser Ala Thr Glu
                165                 170                 175

Ile Glu Lys Ser Ile Ser Ala Arg
            180
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<220>
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<222> (6)..(560)

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      Met Arg Arg Gly Pro Arg Ser Leu Arg Gly Arg Asp Ala Pro Ala
      1               5                   10                  15

ccc acg ccc tgc gtc ccg gcc gag tgc ttc gac ctg ctg gtc cgc cac      98
Pro Thr Pro Cys Val Pro Ala Glu Cys Phe Asp Leu Leu Val Arg His
                20                  25                  30

tgc gtg gcc tgc ggg ctc ctg cgc acg ccg cgg ccg aaa ccg gcc ggg     146
Cys Val Ala Cys Gly Leu Leu Arg Thr Pro Arg Pro Lys Pro Ala Gly
            35                  40                  45

gcc agc agc cct gcg ccc agg acg gcg ctg cag ccg cag gag tcg gtg     194
Ala Ser Ser Pro Ala Pro Arg Thr Ala Leu Gln Pro Gln Glu Ser Val
        50                  55                  60

ggc gcg ggg gcc ggc gag gcg gcg ctg ccc ctg ccc ggg ctg ctc ttt     242
Gly Ala Gly Ala Gly Glu Ala Ala Leu Pro Leu Pro Gly Leu Leu Phe
    65                  70                  75

ggc gcc ccc gcg ctg ctg ggc ctg gca ctg gtc ctg gcg ctg gtc ctg     290
Gly Ala Pro Ala Leu Leu Gly Leu Ala Leu Val Leu Ala Leu Val Leu
80                  85                  90                  95

gtg ggt ctg gtg agc tgg agg cgg cga cag cgg cgg ctt cgc ggc gcg     338
Val Gly Leu Val Ser Trp Arg Arg Arg Gln Arg Arg Leu Arg Gly Ala
                100                 105                 110

tcc tcc gca gag gcc ccc gac gga gac aag gac gcc cca gag ccc ctg     386
Ser Ser Ala Glu Ala Pro Asp Gly Asp Lys Asp Ala Pro Glu Pro Leu
            115                 120                 125

gac aag gtc atc att ctg tct ccg gga atc tct gat gcc aca gct cct     434
Asp Lys Val Ile Ile Leu Ser Pro Gly Ile Ser Asp Ala Thr Ala Pro
        130                 135                 140

gcc tgg cct cct cct ggg gaa gac cca gga acc acc cca cct ggc cac     482
```

```
Ala Trp Pro Pro Pro Gly Glu Asp Pro Gly Thr Thr Pro Pro Gly His
    145                 150                 155

agt gtc cct gtg cca gcc aca gag ctg ggc tcc act gaa ctg gtg acc      530
Ser Val Pro Val Pro Ala Thr Glu Leu Gly Ser Thr Glu Leu Val Thr
160                 165                 170                 175

acc aag acg gcc ggc cct gag caa caa tag cagggagccg gcaggaggtg      580
Thr Lys Thr Ala Gly Pro Glu Gln Gln
                180

gcccctgccc tccctctgga cccccagcca ggggcttgga aatcaaattc agctcttcac  640

tccagcatgc acatgccctc tttctgggac caggctaacc ctgcagaagc acagacacta  700

cagaccacag cattcagccc ccatggagtt tggtgtgctt gcctttggct tcagacctca  760

ccatctttga cagcccttga aggtggtagc ccagctcctg ttcctgtgcc ttcaaaaggc  820

tggggcacta tgagtaaaag accgctttta aaatggggaa ggcaccatta agccaaaatg  880

aatctgaaaa aagacaaaa                                              899


<210>  10
<211>  184
<212>  PRT
<213>  Homo sapiens

<400>  10

Met Arg Arg Gly Pro Arg Ser Leu Arg Gly Arg Asp Ala Pro Ala Pro
1               5                   10                  15

Thr Pro Cys Val Pro Ala Glu Cys Phe Asp Leu Leu Val Arg His Cys
            20                  25                  30

Val Ala Cys Gly Leu Leu Arg Thr Pro Arg Pro Lys Pro Ala Gly Ala
        35                  40                  45

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

Ala Gly Ala Gly Glu Ala Ala Leu Pro Leu Pro Gly Leu Leu Phe Gly
65                  70                  75                  80

Ala Pro Ala Leu Leu Gly Leu Ala Leu Val Leu Ala Leu Val Leu Val
                85                  90                  95

Gly Leu Val Ser Trp Arg Arg Arg Gln Arg Arg Leu Arg Gly Ala Ser
            100                 105                 110

Ser Ala Glu Ala Pro Asp Gly Asp Lys Asp Ala Pro Glu Pro Leu Asp
        115                 120                 125
```

```
Lys Val Ile Ile Leu Ser Pro Gly Ile Ser Asp Ala Thr Ala Pro Ala
    130                 135                 140

Trp Pro Pro Pro Gly Glu Asp Pro Gly Thr Thr Pro Pro Gly His Ser
145                 150                 155                 160

Val Pro Val Pro Ala Thr Glu Leu Gly Ser Thr Glu Leu Val Thr Thr
                165                 170                 175

Lys Thr Ala Gly Pro Glu Gln Gln
            180
```

<210> 11
<211> 585
<212> PRT
<213> Homo sapiens

<400> 11

```
Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
1               5                   10                  15

Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
            20                  25                  30

Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
        35                  40                  45

Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
    50                  55                  60

Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
65                  70                  75                  80

Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
                85                  90                  95

Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
            100                 105                 110

Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
        115                 120                 125

Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
    130                 135                 140
```

```
Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
145                 150                 155                 160

Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
                165                 170                 175

Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
            180                 185                 190

Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
        195                 200                 205

Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
    210                 215                 220

Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
225                 230                 235                 240

Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
                245                 250                 255

Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
            260                 265                 270

Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
        275                 280                 285

Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
    290                 295                 300

Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
305                 310                 315                 320

Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
                325                 330                 335

Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
            340                 345                 350

Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
        355                 360                 365

Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
    370                 375                 380

Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
```

385 390 395 400

Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
405 410 415

Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
420 425 430

Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
435 440 445

Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
450 455 460

Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
465 470 475 480

Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
485 490 495

Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
500 505 510

Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
515 520 525

Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
530 535 540

Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
545 550 555 560

Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
565 570 575

Ala Ala Ser Gln Ala Ala Leu Gly Leu
580 585

<210> 12
<211> 266
<212> PRT
<213> Homo sapiens

<400> 12

Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
1 5 10 15

```
Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
            20                  25                  30

Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
        35                  40                  45

Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
    50                  55                  60

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

Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
                85                  90                  95

Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
            100                 105                 110

Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
        115                 120                 125

Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Gly Ser Tyr
    130                 135                 140

Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu
145                 150                 155                 160

Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile
                165                 170                 175

Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His Leu
            180                 185                 190

Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val
        195                 200                 205

Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn Asn
    210                 215                 220

Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu
225                 230                 235                 240

Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp
                245                 250                 255
```

Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
260 265

<210> 13
<211> 249
<212> PRT
<213> Artificial

<220>
<223> I006D08 scFv

<400> 13

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

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

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

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

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

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

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

Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Phe Ser Ser Glu Leu
130 135 140

Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Val
145 150 155 160

Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln
165 170 175

Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Lys Asn Asn
180 185 190

Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn
195 200 205

Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp
210 215 220

Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Asn His Trp Val Phe Gly
225 230 235 240

Gly Gly Thr Glu Leu Thr Val Leu Gly
245

<210> 14
<211> 251
<212> PRT
<213> Artificial

<220>
<223> I050B11 scFv

<400> 14

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

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

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

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

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

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

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

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

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser
195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr
225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
245 250

<210> 15
<211> 250
<212> PRT
<213> Artificial

<220>
<223> I050A12 scFv

<400> 15

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

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

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

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

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

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

85 90 95

Ala Thr Ala Pro Tyr Asp Leu Leu Thr His Tyr Phe His Tyr Phe Asp
100 105 110

Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu
130 135 140

Leu Thr Gln Asp Pro Ala Val Ser Val Thr Leu Gly Gln Thr Val Arg
145 150 155 160

Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Pro Ser Trp Tyr
165 170 175

Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Pro Lys Asn
180 185 190

Ile Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly
195 200 205

Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala
210 215 220

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

Ala Thr Gly Thr Lys Leu Thr Val Leu Gly
245 250

<210> 16
<211> 251
<212> PRT
<213> Artificial

<220>
<223> I050B11-15 scFv

<400> 16

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

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

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

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
    50                  55                  60

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

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

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp
            100                 105                 110

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

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
    130                 135                 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145                 150                 155                 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
                165                 170                 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr
            180                 185                 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser
        195                 200                 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
    210                 215                 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr
225                 230                 235                 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg
                245                 250
```

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

<220>
<223> I116A01 scFv

<400> 17

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

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

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

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

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

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

Ala Arg Ser Arg Asp Leu Leu Leu Phe Pro His His Ala Leu Ser Pro
100 105 110

Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser
115 120 125

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Phe Ser Ser Glu Leu
130 135 140

Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Val
145 150 155 160

Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Ala Ser Trp Tyr Gln
165 170 175

Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Lys Asn Asn
180 185 190

Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly Asn
195 200 205

Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp
210 215 220

Tyr Tyr Cys Ser Ser Arg Asp Ser Ser Gly Asn His Trp Val Phe Gly
225 230 235 240

Gly Gly Thr Glu Leu Thr Val Leu Gly
245

<210> 18
<211> 250
<212> PRT
<213> Artificial

<220>
<223> I026C04-K scFv

<400> 18

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

Ser Val Lys Val Ser Cys Arg Ala Ser Gly Gly Ser Phe Asn Lys His
20 25 30

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

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

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

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

Ala Arg Glu Leu Gly Leu Ser Ile Val Gly Ala Thr Thr Gly Ala Leu
100 105 110

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

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Gln Ser Val
130 135 140

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

Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Asn Asn Tyr Val Ser
165 170 175

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

Asn Asn Lys Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Lys
195 200 205

Ser Gly Ala Ser Ala Thr Leu Asp Ile Thr Gly Leu Gln Thr Gly Asp
210 215 220

Glu Ala Asp Tyr Tyr Cys Gly Thr Trp His Ser Ser Gln Val Val Phe
225 230 235 240

Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
245 250

<210> 19
<211> 120
<212> PRT
<213> Mus musculus

<400> 19

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

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

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

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

Lys Asn Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
65 70 75 80

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

Ala Arg His Tyr Gly Gly Gly Tyr Trp Phe Phe Asp Val Trp Gly Ala
100 105 110

Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 20

<211> 113
<212> PRT
<213> Mus musculus

<400> 20

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

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

Gly Asn Ser Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala
50 55 60

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

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

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

Arg

<210> 21
<211> 123
<212> PRT
<213> Homo sapiens

<400> 21

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

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

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

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

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

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

Arg Gly Tyr Tyr Asp Ile Leu Thr Gly Tyr Tyr Tyr Tyr Phe Asp Tyr
100 105 110

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

<210> 22
<211> 109
<212> PRT
<213> Homo sapiens

<400> 22

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

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

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

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

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

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

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

<210> 23
<211> 293
<212> PRT
<213> Artificial

<220>
<223> Neutrokine-alpha inhibitory peptibody

<400> 23

Met Leu Pro Gly Cys Lys Trp Asp Leu Leu Ile Lys Gln Trp Val Cys
1 5 10 15

Asp Pro Leu Gly Ser Gly Ser Ala Thr Gly Gly Ser Gly Ser Thr Ala
20 25 30

Ser Ser Gly Ser Gly Ser Ala Thr His Met Leu Pro Gly Cys Lys Trp
35 40 45

Asp Leu Leu Ile Lys Gln Trp Val Cys Asp Pro Leu Gly Gly Gly Gly
50 55 60

Gly Val Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
65 70 75 80

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
85 90 95

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
100 105 110

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
115 120 125

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
130 135 140

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
145 150 155 160

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
165 170 175

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
180 185 190

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
195 200 205

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
210 215 220

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
225 230 235 240

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu

245 250 255

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
260 265 270

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
275 280 285

Leu Ser Pro Gly Lys
290

<210> 24
<211> 293
<212> PRT
<213> Artificial

<220>
<223> Neutrokine-alpha inhibitory peptibody

<400> 24

Met Phe His Asp Cys Lys Trp Asp Leu Leu Thr Lys Gln Trp Val Cys
1 5 10 15

His Gly Leu Gly Ser Gly Ser Ala Thr Gly Gly Ser Gly Ser Thr Ala
20 25 30

Ser Ser Gly Ser Gly Ser Ala Thr His Met Phe His Asp Cys Lys Trp
35 40 45

Asp Leu Leu Thr Lys Gln Trp Val Cys His Gly Leu Gly Gly Gly Gly
50 55 60

Gly Val Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
65 70 75 80

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
85 90 95

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
100 105 110

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
115 120 125

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
130 135 140

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
145 150 155 160

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
165 170 175

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
180 185 190

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
195 200 205

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
210 215 220

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
225 230 235 240

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

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
260 265 270

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
275 280 285

Leu Ser Pro Gly Lys
290

<210> 25
<211> 18
<212> PRT
<213> Artificial

<220>
<223> Neutrokine-alpha binding peptide

<400> 25

Gly Gln Met Gly Trp Arg Trp Asp Pro Leu Thr Lys Met Trp Leu Gly
1 5 10 15

Thr Ser

<210> 26
<211> 70
<212> PRT

<213> Artificial

<220>
<223> Amino acids 1-70 of BAFF-R (SEQ ID NO:10) with V20N & L27P amino acid substitutions

<400> 26

Met Arg Arg Gly Pro Arg Ser Leu Arg Gly Arg Asp Ala Pro Ala Pro
1 5 10 15

Thr Pro Cys Asn Pro Ala Glu Cys Phe Asp Pro Leu Val Arg His Cys
20 25 30

Val Ala Cys Gly Leu Leu Arg Thr Pro Arg Pro Lys Pro Ala Gly Ala
35 40 45

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

Ala Gly Ala Gly Glu Ala
65 70

<210> 27
<211> 17
<212> PRT
<213> Homo sapiens

<220>
<221> SIGNAL
<222> (1)..(17)

<400> 27

Met Leu Gln Asn Ser Ala Val Leu Leu Leu Leu Val Ile Ser Ala Ser
1 5 10 15

Ala

<210> 28
<211> 22
<212> PRT
<213> Artificial

<220>
<223> consensus signal sequence

<220>
<221> SIGNAL
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