SEQUENCE LISTING

<110> Varnum, Brian
Witte, Alison
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Wong, Lu Min
Qian, Xueming

<120> Therapeutic Human Anti-IL-1R Monoclonal Antibody

<130> 01,1554

<160> 79

<170> PatentIn version 3.0

<210> 1
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<212> DNA
<213> Homo Sapiens

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aaagccaaag ggcagccccg agaaccacag gtgtacaccc tgcccccatc ccgggatgag 720

ctgaccaaga accaggtcag cctgacctgc ctggtcaaag gcttctatcc cagcgacatc 780

gccgtggagt gggagagcaa tgggcagccg gagaacaact acaagaccac gcctcccgtg 840

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<210> 2
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<212> PRT

<213> Homo sapiens

<400> 2

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
        35                  40                  45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65                  70                  75                  80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
                85                  90                  95

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
            100                 105                 110

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
        115                 120                 125

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
    130                 135                 140

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
145                 150                 155                 160

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                165                 170                 175

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
            180                 185                 190

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
        195                 200                 205

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
    210                 215                 220

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
225                 230                 235                 240

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                245                 250                 255

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
            260                 265                 270

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
        275                 280                 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
    290                 295                 300
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Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
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Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
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<210> 3
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tggaaggtgg ataacgccct ccaatcgggt aactcccagg agagtgtcac agagcaggac 180

agcaaggaca gcacctacag cctcagcagc accctgacgc tgagcaaagc agactacgag 240

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agcttcaaca ggggagagtg t 321

<210> 4
<211> 107
<212> PRT
<213> Homo sapiens

<400> 4

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

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
50 55 60

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

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
100 105

<210> 5
<211> 978
<212> DNA
<213> Homo sapiens

<400> 5

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ggactctact ccctcagcag cgtggtgacc gtgccctcca gcaacttcgg cacccagacc 240

tacacctgca acgtagatca caagcccagc aacaccaagg tggacaagac agttgagcgc 300

aaatgttgtg tcgagtgccc accgtgccca gcaccacctg tggcaggacc gtcagtcttc 360

ctcttccccc caaaacccaa ggacaccctc atgatctccc ggacccctga ggtcacgtgc 420

gtggtggtgg acgtgagcca cgaagacccc gaggtccagt tcaactggta cgtggacggc 480

gtggaggtgc ataatgccaa gacaaagcca cgggaggagc agttcaacag cacgttccgt 540

gtggtcagcg tcctcaccgt tgtgcaccag gactggctga acggcaagga gtacaagtgc 600

aaggtctcca acaaaggcct cccagccccc atcgagaaaa ccatctccaa aaccaaaggg 660

cagccccgag aaccacaggt gtacaccctg cccccatccc gggaggagat gaccaagaac 720

caggtcagcc tgacctgcct ggtcaaaggc ttctacccca gcgacatcgc cgtggagtgg 780

gagagcaatg ggcagccgga gaacaactac aagaccacac ctcccatgct ggactccgac 840

ggctccttct tcctctacag caagctcacc gtggacaaga gcaggtggca gcaggggaac 900

gtcttctcat gctccgtgat gcatgaggct ctgcacaacc actacacgca gaagagcctc 960

tccctgtctc cgggtaaa 978

<210> 6
<211> 326
<212> PRT
<213> Homo sapiens

<400> 6

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

```
Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro
            100                 105                 110

Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
        115                 120                 125

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
    130                 135                 140

Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly
145                 150                 155                 160

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn
                165                 170                 175

Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp
            180                 185                 190

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro
        195                 200                 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu
    210                 215                 220

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
225                 230                 235                 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
                245                 250                 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
            260                 265                 270

Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
        275                 280                 285

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
    290                 295                 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
305                 310                 315                 320

Ser Leu Ser Pro Gly Lys
                325
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<210> 7
<211> 981
<212> DNA
<213> Homo Sapiens

<400> 7

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tggaactcag gcgccctgac cagcggcgtg cacaccttcc cggctgtcct acagtcctca    180

ggactctact ccctcagcag cgtggtgacc gtgccctcca gcagcttggg cacgaagacc    240

tacacctgca acgtagatca caagcccagc aacaccaagg tggacaagag agttgagtcc    300
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aaatatggtc ccccatgccc atcatgccca gcacctgagt tcctgggggg accatcagtc 360

ttcctgttcc ccccaaaacc caaggacact ctcatgatct cccggacccc tgaggtcacg 420

tgcgtggtgg tggacgtgag ccaggaagac cccgaggtcc agttcaactg gtacgtggat 480

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagttcaa cagcacgtac 540

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaacggcaa ggagtacaag 600

tgcaaggtct ccaacaaagg cctcccgtcc tccatcgaga aaaccatctc caaagccaaa 660

gggcagcccc gagagccaca ggtgtacacc ctgccccccat cccaggagga gatgaccaag 720

aaccaggtca gcctgacctg cctggtcaaa ggcttctacc ccagcgacat cgccgtggag 780

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 840

gacggctcct tcttcctcta cagcaggcta accgtgraca agagcaggtg gcaggagggg 900

aatgtcttct catgctccgt gakgcatgag gctctgcaca accactacac acagaagagc 960

ctctccctgt ctctgggtaa a 981

<210> 8
<211> 327
<212> PRT
<213> Homo sapiens

<400> 8

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
1 5 10 15

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

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

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

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
100 105 110

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
115 120 125

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
130 135 140

```
Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
145                 150                 155                 160

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
                165                 170                 175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
            180                 185                 190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
        195                 200                 205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
    210                 215                 220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
225                 230                 235                 240

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
                245                 250                 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
            260                 265                 270

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
        275                 280                 285

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser
    290                 295                 300

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
305                 310                 315                 320

Leu Ser Leu Ser Leu Gly Lys
                325
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<210> 9
<211> 417
<212> DNA
<213> Homo Sapiens

<400> 9

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gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc    120

tgtgcagcgt ctggattcac cttcagcaac tatggcatgc actgggtccg ccaggctcca    180

ggcaaggggc tggagtgggt ggcaggcatt tggaatgatg gaattaataa ataccatgca    240

cactccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg    300

caaatgaaca gcccgagagc cgaggacacg gctgtgtatt actgtgcgag agcacggtct    360

ttcgactggc tattatttga gttctggggc cagggaaccc tggtcaccgt ctctagt       417
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<210> 10
<211> 139
<212> PRT

<213> Homo sapiens

<400> 10

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
            20                  25                  30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
        35                  40                  45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Val Ala Gly Ile Trp Asn Asp Gly Ile Asn Lys Tyr His Ala
65                  70                  75                  80

His Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
                85                  90                  95

Thr Leu Tyr Leu Gln Met Asn Ser Pro Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Ala Arg Ser Phe Asp Trp Leu Leu Phe Glu Phe
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135
```

<210> 11
<211> 384
<212> DNA
<213> Homo Sapiens

<400> 11

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atggaagccc cagctcagct tctcttcctc ctgctactct ggctcccaga taccaccgga     60

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc    120

ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct    180

ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc    240

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct    300

gaagattttg cagtttatta ctgtcagcag cgtagcaact ggcctccgct cactttcggc    360

ggagggacca aggtggagat caaa                                           384
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<210> 12
<211> 128
<212> PRT
<213> Homo sapiens

<400> 12

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Met Glu Ala Pro Ala Gln Leu Leu Phe Leu Leu Leu Leu Trp Leu Pro
```

```
1               5                   10                  15

Asp Thr Thr Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
            20                  25                  30

Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
        35                  40                  45

Val Ser Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
    50                  55                  60

Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala
65                  70                  75                  80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
                85                  90                  95

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

Asn Trp Pro Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
        115                 120                 125
```

<210> 13
<211> 417
<212> DNA
<213> Homo Sapiens

<400> 13

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atggagtttg ggctgagctg ggttttcctc gttgctcttt taagaggtgt ccagtgtcag     60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc    120

tgtgcagtgt ctggattcac cttcagtaac tatggcatgc actgggtccg ccaggctcca    180

ggcaaggggc tggagtgggt ggcagctata tggaatgatg gagaaaataa acaccatgca    240

ggctccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg    300

caaatgaaca gcctgagagc cgaggacacg gctgtgtatt actgtgcgag aggacgatat    360

tttgactggt tattatttga gtattggggc cagggaaccc tggtcaccgt ctctagt       417
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<210> 14
<211> 139
<212> PRT
<213> Homo sapiens

<400> 14

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
            20                  25                  30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe
        35                  40                  45
```

```
Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Val Ala Ala Ile Trp Asn Asp Gly Glu Asn Lys His His Ala
65                  70                  75                  80

Gly Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
                85                  90                  95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Gly Arg Tyr Phe Asp Trp Leu Leu Phe Glu Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135
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<210> 15
<211> 411
<212> DNA
<213> Homo Sapiens

<400> 15

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gtgcagctga tgcagtctgg agcagaggtg aaaaagcccg gggagtctct gaagatctcc    120

tgtaagggtt ctggatacag cttttccttc cactggatcg cctgggtgcg ccagatgccc    180

gggaaaggcc tggagtggat ggggatcatc catcctggtg cctctgatac cagatacagc    240

ccgtccttcc aaggccaggt caccatctca gccgacaact ccaacagcgc cacctacctg    300

cagtggagca gcctgaaggc ctcggacacc gccatgtatt tctgtgcgag acaaagggaa    360

ctcgactact ttgactactg gggccaggga accctggtca ccgtctctag t             411
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<210> 16
<211> 137
<212> PRT
<213> Homo sapiens

<400> 16

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Met Gly Ser Thr Ala Ile Leu Ala Leu Leu Leu Ala Val Leu Gln Gly
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Val Cys Ala Glu Val Gln Leu Met Gln Ser Gly Ala Glu Val Lys Lys
            20                  25                  30

Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe
        35                  40                  45

Ser Phe His Trp Ile Ala Trp Val Arg Gln Met Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Met Gly Ile Ile His Pro Gly Ala Ser Asp Thr Arg Tyr Ser
65                  70                  75                  80
```

```
Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Asn Ser Asn Ser
                85                  90                  95

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

Tyr Phe Cys Ala Arg Gln Arg Glu Leu Asp Tyr Phe Asp Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser
    130                 135
```

<210> 17
<211> 378
<212> DNA
<213> Homo Sapiens

<400> 17

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attgtgctga ctcagtctcc agactttcag tctgtgactc caaaggagaa agtcaccatc    120

acctgccggg ccagtcagag cattggtagt agcttacact ggtaccagca gaaaccagat    180

cagtctccaa agctcctcat caagtatgct tcccagtcct tctcaggggt cccctcgagg    240

ttcagtggca gtggatctgg gacagatttc accctcacca tcaatagcct ggaagctgaa    300

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accaaggtgg agatcaaa                                                  378
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<210> 18
<211> 126
<212> PRT
<213> Homo sapiens

<400> 18

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Met Ser Pro Ser Gln Leu Ile Gly Phe Leu Leu Leu Trp Val Pro Ala
1               5                   10                  15

Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val
            20                  25                  30

Thr Pro Lys Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile
        35                  40                  45

Gly Ser Ser Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys
    50                  55                  60

Leu Leu Ile Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg
65                  70                  75                  80

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser
                85                  90                  95

Leu Glu Ala Glu Asp Ala Ala Ala Tyr Tyr Cys His Gln Ser Ser Ser
```

100 105 110

Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

<210> 19
<211> 1407
<212> DNA
<213> Homo Sapiens

<400> 19
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gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120

tgtgcagcgt ctggattcac cttcagcaac tatggcatgc actgggtccg ccaggctcca 180

ggcaaggggc tggagtgggt ggcaggcatt tggaatgatg gaattaataa ataccatgca 240

cactccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg 300

caaatgaaca gcccgagagc cgaggacacg gctgtgtatt actgtgcgag agcacggtct 360

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tccaccaagg gcccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc 480

acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540

aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 660

atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagaaagt tgagcccaaa 720

tcttgtgaca aaactcacac atgcccaccg tgcccagcac ctgaactcct gggggggaccg 780

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 840

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 900

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 960

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1020

tacaagtgca aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa 1080

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggatgagctg 1140

accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 1200

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1260

gactccgacg gctccttctt cctctatagc aagctcaccg tggacaagag caggtggcag 1320

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1380

aagagcctct ccctgtctcc gggtaaa 1407

<210> 20
<211> 469
<212> PRT
<213> Homo sapiens

<400> 20

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
            20                  25                  30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
        35                  40                  45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Val Ala Gly Ile Trp Asn Asp Gly Ile Asn Lys Tyr His Ala
65                  70                  75                  80

His Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
                85                  90                  95

Thr Leu Tyr Leu Gln Met Asn Ser Pro Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Ala Arg Ser Phe Asp Trp Leu Leu Phe Glu Phe
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
    130                 135                 140

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

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
                165                 170                 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
            180                 185                 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
        195                 200                 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
    210                 215                 220

Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
225                 230                 235                 240

Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
                245                 250                 255

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            260                 265                 270

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        275                 280                 285
```

```
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
    290                 295                 300

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
305                 310                 315                 320

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                325                 330                 335

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
            340                 345                 350

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        355                 360                 365

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
    370                 375                 380

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
385                 390                 395                 400

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                405                 410                 415

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
            420                 425                 430

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
        435                 440                 445

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
    450                 455                 460

Leu Ser Pro Gly Lys
465
```

<210> 21
<211> 1395
<212> DNA
<213> Homo sapiens

<400> 21

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atggagtttg ggctgagctg ggtcttcctc gttgctcttt taagaggtgt ccagtgtcag     60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc    120

tgtgcagcgt ctggattcac cttcagcaac tatggcatgc actgggtccg ccaggctcca    180

ggcaaggggc tggagtgggt ggcaggcatt tggaatgatg gaattaataa ataccatgca    240

cactccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg    300

caaatgaaca gcccgagagc cgaggacacg gctgtgtatt actgtgcgag agcacggtct    360

ttcgactggc tattatttga gttctggggc cagggaaccc tggtcaccgt ctctagtgcc    420

tccaccaagg gcccatcggt cttccccctg gcgccctgct ccaggagcac ctccgagagc    480

acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg    540
```

aactcaggcg ctctgaccag cggcgtgcac accttcccag ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca acttcggcac ccagacctac 660

acctgcaacg tagatcacaa gcccagcaac accaaggtgg acaagacagt tgagcgcaaa 720

tgttgtgtcg agtgcccacc gtgcccagca ccacctgtgg caggaccgtc agtcttcctc 780

ttcccccaa aacccaagga caccctcatg atctcccgga cccctgaggt cacgtgcgtg 840

gtggtggacg tgagccacga agaccccgag gtccagttca actggtacgt ggacggcgtg 900

gaggtgcata atgccaagac aaagccacgg gaggagcagt tcaacagcac gttccgtgtg 960

gtcagcgtcc tcaccgttgt gcaccaggac tggctgaacg gcaaggagta caagtgcaag 1020

gtctccaaca aaggcctccc agcccccatc gagaaaacca tctccaaaac caaagggcag 1080

ccccgagaac cacaggtgta caccctgccc ccatcccggg aggagatgac caagaaccag 1140

gtcagcctga cctgcctggt caaaggcttc taccccagcg acatcgccgt ggagtgggag 1200

agcaatgggc agccggagaa caactacaag accacacctc ccatgctgga ctccgacggc 1260

tccttcttcc tctacagcaa gctcaccgtg gacaagagca ggtggcagca ggggaacgtc 1320

ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacgcagaa gagcctctcc 1380

ctgtctccgg gtaaa 1395

<210> 22
<211> 465
<212> PRT
<213> Homo sapiens

<400> 22

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Gly Ile Trp Asn Asp Gly Ile Asn Lys Tyr His Ala
65 70 75 80

His Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Pro Arg Ala Glu Asp Thr Ala Val
100 105 110

```
Tyr Tyr Cys Ala Arg Ala Arg Ser Phe Asp Trp Leu Leu Phe Glu Phe
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
    130                 135                 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145                 150                 155                 160

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
                165                 170                 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
            180                 185                 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
        195                 200                 205

Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val
    210                 215                 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys
225                 230                 235                 240

Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
                245                 250                 255

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
            260                 265                 270

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
        275                 280                 285

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
    290                 295                 300

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
305                 310                 315                 320

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
                325                 330                 335

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
            340                 345                 350

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
        355                 360                 365

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
    370                 375                 380

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
385                 390                 395                 400

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
                405                 410                 415

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
            420                 425                 430
```

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
435 440 445

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
450 455 460

Lys
465

<210> 23
<211> 1398
<212> DNA
<213> homo sapiens

<400> 23
atggagtttg ggctgagctg ggtcttcctc gttgctcttt taagaggtgt ccagtgtcag 60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120

tgtgcagcgt ctggattcac cttcagcaac tatggcatgc actgggtccg ccaggctcca 180

ggcaaggggc tggagtgggt ggcaggcatt tggaatgatg gaattaataa ataccatgca 240

cactccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg 300

caaatgaaca gcccgagagc cgaggacacg gctgtgtatt actgtgcgag agcacggtct 360

ttcgactggc tattatttga gttctggggc cagggaaccc tggtcaccgt ctctagtgcc 420

agcaccaagg ggccatccgt cttccccctg gcgccctgct ccaggagcac ctccgagagc 480

acagccgccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540

aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac gaagacctac 660

acctgcaacg tagatcacaa gcccagcaac accaaggtgg acaagagagt tgagtccaaa 720

tatggtcccc catgcccatc atgcccagca cctgagttcc tgggggggacc atcagtcttc 780

ctgttccccc caaaacccaa ggacactctc atgatctccc ggaccctga ggtcacgtgc 840

gtggtggtgg acgtgagcca ggaagacccc gaggtccagt tcaactggta cgtggatggc 900

gtggaggtgc ataatgccaa gacaaagccg cgggaggagc agttcaacag cacgtaccgt 960

gtggtcagcg tcctcaccgt cctgcaccag gactggctga acggcaagga gtacaagtgc 1020

aaggtctcca acaaaggcct cccgtcctcc atcgagaaaa ccatctccaa agccaaaggg 1080

cagccccgag agccacaggt gtacaccctg cccccatccc aggaggagat gaccaagaac 1140

caggtcagcc tgacctgcct ggtcaaaggc ttctacccca gcgacatcgc cgtggagtgg 1200

gagagcaatg ggcagccgga gaacaactac aagaccacgc ctcccgtgct ggactccgac 1260

ggctccttct tcctctacag caggctaacc gtgracaaga gcaggtggca ggaggggaat 1320

gtcttctcat gctccgtgak gcatgaggct ctgcacaacc actacacaca gaagagcctc 1380

tccctgtctc tgggtaaa 1398

<210> 24
<211> 466
<212> PRT
<213> Homo sapiens

<400> 24

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Gly Ile Trp Asn Asp Gly Ile Asn Lys Tyr His Ala
65 70 75 80

His Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Pro Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ala Arg Ser Phe Asp Trp Leu Leu Phe Glu Phe
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
130 135 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145 150 155 160

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
165 170 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
180 185 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
195 200 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
210 215 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
225 230 235 240

Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Glu Gly Gly
245 250 255

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile

```
            260                 265                 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
        275                 280                 285

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
    290                 295                 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
305                 310                 315                 320

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
                325                 330                 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
            340                 345                 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
        355                 360                 365

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
    370                 375                 380

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
385                 390                 395                 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
                405                 410                 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
            420                 425                 430

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
        435                 440                 445

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
    450                 455                 460

Gly Lys
465
```

<210> 25
<211> 1407
<212> DNA
<213> Homo Sapiens

<400> 25

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atggagtttg ggctgagctg ggttttcctc gttgctcttt taagaggtgt ccagtgtcag     60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc    120

tgtgcagtgt ctggattcac cttcagtaac tatggcatgc actgggtccg ccaggctcca    180

ggcaaggggc tggagtgggt ggcagctata tggaatgatg gagaaaataa acaccatgca    240

ggctccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg    300

caaatgaaca gcctgagagc cgaggacacg gctgtgtatt actgtgcgag aggacgatat    360

tttgactggt tattatttga gtattggggc cagggaaccc tggtcaccgt ctctagtgcc    420
```

tccaccaagg gcccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc 480

acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540

aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 660

atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagaaagt tgagcccaaa 720

tcttgtgaca aaactcacac atgcccaccg tgcccagcac ctgaactcct gggggggaccg 780

tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 840

gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 900

gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 960

acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 1020

tacaagtgca aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa 1080

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggatgagctg 1140

accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 1200

gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1260

gactccgacg gctccttctt cctctatagc aagctcaccg tggacaagag caggtggcag 1320

caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1380

aagagcctct ccctgtctcc gggtaaa 1407

<210> 26
<211> 469
<212> PRT
<213> Homo sapiens

<400> 26

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe
35 40 45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Ala Ile Trp Asn Asp Gly Glu Asn Lys His His Ala
65 70 75 80

Gly Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

```
Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Gly Arg Tyr Phe Asp Trp Leu Leu Phe Glu Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
    130                 135                 140

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

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
                165                 170                 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
            180                 185                 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
        195                 200                 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
    210                 215                 220

Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys
225                 230                 235                 240

Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
                245                 250                 255

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
            260                 265                 270

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
        275                 280                 285

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
    290                 295                 300

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
305                 310                 315                 320

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
                325                 330                 335

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
            340                 345                 350

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
        355                 360                 365

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
    370                 375                 380

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
385                 390                 395                 400

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
                405                 410                 415
```

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
420 425 430

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
435 440 445

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
450 455 460

Leu Ser Pro Gly Lys
465

<210> 27
<211> 1395
<212> DNA
<213> Homo sapiens

<400> 27
atggagtttg ggctgagctg ggttttcctc gttgctcttt taagaggtgt ccagtgtcag 60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120

tgtgcagtgt ctggattcac cttcagtaac tatggcatgc actgggtccg ccaggctcca 180

ggcaaggggc tggagtgggt ggcagctata tggaatgatg gagaaaataa acaccatgca 240

ggctccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg 300

caaatgaaca gcctgagagc cgaggacacg gctgtgtatt actgtgcgag aggacgatat 360

tttgactggt tattatttga gtattggggc cagggaaccc tggtcaccgt ctctagtgcc 420

tccaccaagg gcccatcggt cttccccctg gcgccctgct ccaggagcac ctccgagagc 480

acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540

aactcaggcg ctctgaccag cggcgtgcac accttcccag ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca acttcggcac ccagacctac 660

acctgcaacg tagatcacaa gcccagcaac accaaggtgg acaagacagt tgagcgcaaa 720

tgttgtgtcg agtgcccacc gtgcccagca ccacctgtgg caggaccgtc agtcttcctc 780

ttccccccaa aacccaagga caccctcatg atctcccgga cccctgaggt cacgtgcgtg 840

gtggtggacg tgagccacga agaccccgag gtccagttca actggtacgt ggacggcgtg 900

gaggtgcata atgccaagac aaagccacgg gaggagcagt tcaacagcac gttccgtgtg 960

gtcagcgtcc tcaccgttgt gcaccaggac tggctgaacg gcaaggagta caagtgcaag 1020

gtctccaaca aaggcctccc agcccccatc gagaaaacca tctccaaaac caaagggcag 1080

ccccgagaac cacaggtgta caccctgccc ccatcccggg aggagatgac caagaaccag 1140

gtcagcctga cctgcctggt caaaggcttc taccccagcg acatcgccgt ggagtgggag 1200

agcaatgggc agccggagaa caactacaag accacacctc ccatgctgga ctccgacggc 1260

tccttcttcc tctacagcaa gctcaccgtg gacaagagca ggtggcagca ggggaacgtc 1320

ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacgcagaa gagcctctcc 1380

ctgtctccgg gtaaa 1395

<210> 28
<211> 465
<212> PRT
<213> Homo sapiens

<400> 28

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe
35 40 45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Ala Ile Trp Asn Asp Gly Glu Asn Lys His His Ala
65 70 75 80

Gly Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Gly Arg Tyr Phe Asp Trp Leu Leu Phe Glu Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
130 135 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145 150 155 160

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
165 170 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
180 185 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
195 200 205

Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val
210 215 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys
225 230 235 240

```
Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
                245                 250                 255

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
            260                 265                 270

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
        275                 280                 285

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
    290                 295                 300

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
305                 310                 315                 320

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
                325                 330                 335

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
            340                 345                 350

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
        355                 360                 365

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
    370                 375                 380

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
385                 390                 395                 400

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
                405                 410                 415

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
            420                 425                 430

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
        435                 440                 445

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
    450                 455                 460

Lys
465
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<210> 29
<211> 1398
<212> DNA
<213> Homo sapiens

<400> 29
atggagtttg ggctgagctg ggttttcctc gttgctcttt taagaggtgt ccagtgtcag 60

gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120

tgtgcagtgt ctggattcac cttcagtaac tatggcatgc actgggtccg ccaggctcca 180

ggcaaggggc tggagtgggt ggcagctata tggaatgatg gagaaaataa acaccatgca 240

ggctccgtga ggggccgatt caccatctcc agagacaatt ccaagaacac gctgtatctg 300

caaatgaaca gcctgagagc cgaggacacg gctgtgtatt actgtgcgag aggacgatat 360

tttgactggt tattatttga gtattggggc cagggaaccc tggtcaccgt ctctagtgcc 420

agcaccaagg ggccatccgt cttccccctg gcgccctgct ccaggagcac ctccgagagc 480

acagccgccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540

aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 600

ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac gaagacctac 660

acctgcaacg tagatcacaa gcccagcaac accaaggtgg acaagagagt tgagtccaaa 720

tatggtcccc catgcccatc atgcccagca cctgagttcc tgggggggacc atcagtcttc 780

ctgttccccc caaaacccaa ggacactctc atgatctccc ggaccctga ggtcacgtgc 840

gtggtggtgg acgtgagcca ggaagacccc gaggtccagt tcaactggta cgtggatggc 900

gtggaggtgc ataatgccaa gacaaagccg cgggaggagc agttcaacag cacgtaccgt 960

gtggtcagcg tcctcaccgt cctgcaccag gactggctga acggcaagga gtacaagtgc 1020

aaggtctcca acaaaggcct cccgtcctcc atcgagaaaa ccatctccaa agccaaaggg 1080

cagccccgag agccacaggt gtacaccctg cccccatccc aggaggagat gaccaagaac 1140

caggtcagcc tgacctgcct ggtcaaaggc ttctacccca gcgacatcgc cgtggagtgg 1200

gagagcaatg ggcagccgga gaacaactac aagaccacgc ctcccgtgct ggactccgac 1260

ggctccttct tcctctacag caggctaacc gtgracaaga gcaggtggca ggaggggaat 1320

gtcttctcat gctccgtgak gcatgaggct ctgcacaacc actacacaca gaagagcctc 1380

tccctgtctc tgggtaaa 1398

<210> 30
<211> 466
<212> PRT
<213> Homo sapiens

<400> 30

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

Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Val Ser Gly Phe Thr Phe
35 40 45

Ser Asn Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Ala Ile Trp Asn Asp Gly Glu Asn Lys His His Ala

65 70 75 80

Gly Ser Val Arg Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Gly Arg Tyr Phe Asp Trp Leu Leu Phe Glu Tyr
115 120 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
130 135 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145 150 155 160

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
165 170 175

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
180 185 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
195 200 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
210 215 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
225 230 235 240

Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Glu Gly Gly
245 250 255

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
260 265 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
275 280 285

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
290 295 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
305 310 315 320

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
325 330 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
340 345 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
355 360 365

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
370 375 380

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

385 390 395 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
405 410 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
420 425 430

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
435 440 445

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu
450 455 460

Gly Lys
465

<210> 31
<211> 1401
<212> DNA
<213> Homo Sapiens

<400> 31
atggggtcaa ccgccatcct cgccctcctc ctggctgttc tccaaggagt ctgtgccgag 60

gtgcagctga tgcagtctgg agcagaggtg aaaaagcccg gggagtctct gaagatctcc 120

tgtaagggtt ctggatacag cttttccttc cactggatcg cctgggtgcg ccagatgccc 180

gggaaaggcc tggagtggat ggggatcatc catcctggtg cctctgatac cagatacagc 240

ccgtccttcc aaggccaggt caccatctca gccgacaact ccaacagcgc cacctacctg 300

cagtggagca gcctgaaggc ctcggacacc gccatgtatt tctgtgcgag acaaagggaa 360

ctcgactact ttgactactg gggccaggga accctggtca ccgtctctag tgcctccacc 420

aagggcccat cggtcttccc cctggcaccc tcctccaaga gcacctctgg gggcacagcg 480

gccctgggct gcctggtcaa ggactacttc cccgaaccgg tgacggtgtc gtggaactca 540

ggcgccctga ccagcggcgt gcacaccttc ccggctgtcc tacagtcctc aggactctac 600

tccctcagca gcgtggtgac cgtgccctcc agcagcttgg gcacccagac ctacatctgc 660

aacgtgaatc acaagcccag caacaccaag gtggacaaga aagttgagcc caaatcttgt 720

gacaaaactc acacatgccc accgtgccca gcacctgaac tcctgggggg accgtcagtc 780

ttcctcttcc ccccaaaacc caaggacacc ctcatgatct cccggacccc tgaggtcaca 840

tgcgtggtgg tggacgtgag ccacgaagac cctgaggtca agttcaactg gtacgtggac 900

ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagtacaa cagcacgtac 960

cgtgtggtca gcgtcctcac cgtcctgcac caggactggc tgaatggcaa ggagtacaag 1020

tgcaaggtct ccaacaaagc cctcccagcc cccatcgaga aaaccatctc caaagccaaa 1080

gggcagcccc gagaaccaca ggtgtacacc ctgccccccat cccgggatga gctgaccaag 1140

aaccaggtca gcctgacctg cctggtcaaa ggcttctatc ccagcgacat cgccgtggag 1200

tgggagagca atgggcagcc ggagaacaac tacaagacca cgcctcccgt gctggactcc 1260

gacggctcct tcttcctcta tagcaagctc accgtggaca agagcaggtg gcagcagggg 1320

aacgtcttct catgctccgt gatgcatgag gctctgcaca accactacac gcagaagagc 1380

ctctccctgt ctccgggtaa a 1401

<210> 32
<211> 467
<212> PRT
<213> Homo sapiens

<400> 32

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

Val Cys Ala Glu Val Gln Leu Met Gln Ser Gly Ala Glu Val Lys Lys
20 25 30

Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe
35 40 45

Ser Phe His Trp Ile Ala Trp Val Arg Gln Met Pro Gly Lys Gly Leu
50 55 60

Glu Trp Met Gly Ile Ile His Pro Gly Ala Ser Asp Thr Arg Tyr Ser
65 70 75 80

Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Asn Ser Asn Ser
85 90 95

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

Tyr Phe Cys Ala Arg Gln Arg Glu Leu Asp Tyr Phe Asp Tyr Trp Gly
115 120 125

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

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

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
165 170 175

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
180 185 190

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

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
210 215 220

```
Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
225                 230                 235                 240

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
                245                 250                 255

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
            260                 265                 270

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
        275                 280                 285

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    290                 295                 300

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
305                 310                 315                 320

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                325                 330                 335

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            340                 345                 350

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        355                 360                 365

Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    370                 375                 380

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
385                 390                 395                 400

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                405                 410                 415

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            420                 425                 430

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        435                 440                 445

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    450                 455                 460

Pro Gly Lys
465
```

<210> 33
<211> 1389
<212> DNA
<213> Homo sapiens

<400> 33
atggggtcaa ccgccatcct cgccctcctc ctggctgttc tccaaggagt ctgtgccgag 60

gtgcagctga tgcagtctgg agcagaggtg aaaaagcccg gggagtctct gaagatctcc 120

tgtaagggtt ctggatacag cttttccttc cactggatcg cctgggtgcg ccagatgccc 180

gggaaaggcc tggagtggat ggggatcatc catcctggtg cctctgatac cagatacagc 240

ccgtccttcc aaggccaggt caccatctca gccgacaact ccaacagcgc cacctacctg 300

cagtggagca gcctgaaggc ctcggacacc gccatgtatt tctgtgcgag acaaagggaa 360

ctcgactact ttgactactg gggccaggga accctggtca ccgtctctag tgcctccacc 420

aagggcccat cggtcttccc cctggcgccc tgctccagga gcacctccga gagcacagcg 480

gccctgggct gcctggtcaa ggactacttc cccgaaccgg tgacggtgtc gtggaactca 540

ggcgctctga ccagcggcgt gcacaccttc ccagctgtcc tacagtcctc aggactctac 600

tccctcagca gcgtggtgac cgtgccctcc agcaacttcg gcacccagac ctacacctgc 660

aacgtagatc acaagcccag caacaccaag gtggacaaga cagttgagcg caaatgttgt 720

gtcgagtgcc caccgtgccc agcaccacct gtggcaggac cgtcagtctt cctcttcccc 780

ccaaaaccca aggacaccct catgatctcc cggacccctg aggtcacgtg cgtggtggtg 840

gacgtgagcc acgaagaccc cgaggtccag ttcaactggt acgtggacgg cgtggaggtg 900

cataatgcca agacaaagcc acgggaggag cagttcaaca gcacgttccg tgtggtcagc 960

gtcctcaccg ttgtgcacca ggactggctg aacggcaagg agtacaagtg caaggtctcc 1020

aacaaaggcc tcccagcccc catcgagaaa accatctcca aaaccaaagg gcagccccga 1080

gaaccacagg tgtacaccct gcccccatcc cgggaggaga tgaccaagaa ccaggtcagc 1140

ctgacctgcc tggtcaaagg cttctacccc agcgacatcg ccgtggagtg ggagagcaat 1200

gggcagccgg agaacaacta caagaccaca cctcccatgc tggactccga cggctccttc 1260

ttcctctaca gcaagctcac cgtggacaag agcaggtggc agcaggggaa cgtcttctca 1320

tgctccgtga tgcatgaggc tctgcacaac cactacacgc agaagagcct ctccctgtct 1380

ccgggtaaa 1389

<210> 34
<211> 463
<212> PRT
<213> Homo sapiens

<400> 34

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

Val Cys Ala Glu Val Gln Leu Met Gln Ser Gly Ala Glu Val Lys Lys
20 25 30

Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe
35 40 45

```
Ser Phe His Trp Ile Ala Trp Val Arg Gln Met Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Met Gly Ile Ile His Pro Gly Ala Ser Asp Thr Arg Tyr Ser
65                  70                  75                  80

Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Asn Ser Asn Ser
                85                  90                  95

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

Tyr Phe Cys Ala Arg Gln Arg Glu Leu Asp Tyr Phe Asp Tyr Trp Gly
        115                 120                 125

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
145                 150                 155                 160

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
                165                 170                 175

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
            180                 185                 190

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

Pro Ser Ser Asn Phe Gly Thr Gln Thr Tyr Thr Cys Asn Val Asp His
    210                 215                 220

Lys Pro Ser Asn Thr Lys Val Asp Lys Thr Val Glu Arg Lys Cys Cys
225                 230                 235                 240

Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val
                245                 250                 255

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
            260                 265                 270

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
        275                 280                 285

Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
    290                 295                 300

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser
305                 310                 315                 320

Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
                325                 330                 335

Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile
            340                 345                 350

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

```
Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
    370                 375                 380

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
385                 390                 395                 400

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser
                405                 410                 415

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
            420                 425                 430

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
        435                 440                 445

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
    450                 455                 460
```

<210> 35
<211> 1392
<212> DNA
<213> Homo sapiens

<400> 35

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atggggtcaa ccgccatcct cgccctcctc ctggctgttc tccaaggagt ctgtgccgag     60

gtgcagctga tgcagtctgg agcagaggtg aaaaagcccg gggagtctct gaagatctcc    120

tgtaagggtt ctggatacag cttttccttc cactggatcg cctgggtgcg ccagatgccc    180

gggaaaggcc tggagtggat ggggatcatc catcctggtg cctctgatac cagatacagc    240

ccgtccttcc aaggccaggt caccatctca gccgacaact ccaacagcgc cacctacctg    300

cagtggagca gcctgaaggc ctcggacacc gccatgtatt tctgtgcgag acaaagggaa    360

ctcgactact ttgactactg gggccaggga accctggtca ccgtctctag tgccagcacc    420

aaggggccat ccgtcttccc cctggcgccc tgctccagga gcacctccga gagcacagcc    480

gccctgggct gcctggtcaa ggactacttc cccgaaccgg tgacggtgtc gtggaactca    540

ggcgccctga ccagcggcgt gcacaccttc ccggctgtcc tacagtcctc aggactctac    600

tccctcagca gcgtggtgac cgtgccctcc agcagcttgg gcacgaagac ctacacctgc    660

aacgtagatc acaagcccag caacaccaag gtggacaaga gagttgagtc caaatatggt    720

cccccatgcc catcatgccc agcacctgag ttcctggggg gaccatcagt cttcctgttc    780

cccccaaaac ccaaggacac tctcatgatc tcccggaccc ctgaggtcac gtgcgtggtg    840

gtggacgtga gccaggaaga ccccgaggtc cagttcaact ggtacgtgga tggcgtggag    900

gtgcataatg ccaagacaaa gccgcgggag gagcagttca acagcacgta ccgtgtggtc    960

agcgtcctca ccgtcctgca ccaggactgg ctgaacggca aggagtacaa gtgcaaggtc   1020

tccaacaaag gcctcccgtc ctccatcgag aaaaccatct ccaaagccaa agggcagccc   1080
```

cgagagccac aggtgtacac cctgccccca tcccaggagg agatgaccaa gaaccaggtc 1140

agcctgacct gcctggtcaa aggcttctac cccagcgaca tcgccgtgga gtgggagagc 1200

aatgggcagc cggagaacaa ctacaagacc acgcctcccg tgctggactc cgacggctcc 1260

ttcttcctct acagcaggct aaccgtgrac aagagcaggt ggcaggaggg gaatgtcttc 1320

tcatgctccg tgakgcatga ggctctgcac aaccactaca cacagaagag cctctccctg 1380

tctctgggta aa 1392

<210> 36
<211> 464
<212> PRT
<213> Homo sapiens

<400> 36

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

Val Cys Ala Glu Val Gln Leu Met Gln Ser Gly Ala Glu Val Lys Lys
20 25 30

Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe
35 40 45

Ser Phe His Trp Ile Ala Trp Val Arg Gln Met Pro Gly Lys Gly Leu
50 55 60

Glu Trp Met Gly Ile Ile His Pro Gly Ala Ser Asp Thr Arg Tyr Ser
65 70 75 80

Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Asn Ser Asn Ser
85 90 95

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

Tyr Phe Cys Ala Arg Gln Arg Glu Leu Asp Tyr Phe Asp Tyr Trp Gly
115 120 125

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

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
145 150 155 160

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
165 170 175

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
180 185 190

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

Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His

```
    210                 215                 220

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly
225                 230                 235                 240

Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Glu Gly Gly Pro Ser
                245                 250                 255

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

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
        275                 280                 285

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
    290                 295                 300

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
305                 310                 315                 320

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
                325                 330                 335

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
            340                 345                 350

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
        355                 360                 365

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
    370                 375                 380

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
385                 390                 395                 400

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
                405                 410                 415

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
            420                 425                 430

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
        435                 440                 445

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
    450                 455                 460
```

<210> 37
<211> 705
<212> DNA
<213> Homo Sapiens

<400> 37
atggaagccc cagctcagct tctcttcctc ctgctactct ggctcccaga taccaccgga 60

gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 120

ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 180

ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 240

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 300

gaagattttg cagtttatta ctgtcagcag cgtagcaact ggcctccgct cactttcggc 360

ggagggacca aggtggagat caaacgaact gtggctgcac catctgtctt catcttcccg 420

ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc 480

tatcccagag aggccaaagt acagtggaag gtggataacg ccctccaatc gggtaactcc 540

caggagagtg tcacagagca ggacagcaag gacagcacct acagcctcag cagcaccctg 600

acgctgagca aagcagacta cgagaaacac aaagtctacg cctgcgaagt cacccatcag 660

ggcctgagct cgcccgtcac aaagagcttc aacaggggag agtgt 705

<210> 38
<211> 235
<212> PRT
<213> Homo sapiens

<400> 38

Met Glu Ala Pro Ala Gln Leu Leu Phe Leu Leu Leu Trp Leu Pro
1 5 10 15

Asp Thr Thr Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
20 25 30

Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser
35 40 45

Val Ser Ser Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
50 55 60

Arg Leu Leu Ile Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala
65 70 75 80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
85 90 95

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

Asn Trp Pro Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
130 135 140

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
145 150 155 160

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
165 170 175

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
180 185 190

```
Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
        195                 200                 205

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
    210                 215                 220

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225                 230                 235
```

<210> 39
<211> 699
<212> DNA
<213> Homo Sapiens

<400> 39

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atgtcgccat cacaactcat tgggtttctg ctgctctggg ttccagcctc caggggtgaa     60

attgtgctga ctcagtctcc agactttcag tctgtgactc caaaggagaa agtcaccatc    120

acctgccggg ccagtcagag cattggtagt agcttacact ggtaccagca gaaaccagat    180

cagtctccaa agctcctcat caagtatgct tcccagtcct tctcaggggt cccctcgagg    240

ttcagtggca gtggatctgg gacagatttc accctcacca tcaatagcct ggaagctgaa    300

gatgctgcag cgtattactg tcatcagagt agtagtttac ctctcacttt cggcggaggg    360

accaaggtgg agatcaaacg aactgtggct gcaccatctg tcttcatctt cccgccatct    420

gatgagcagt tgaaatctgg aactgcctct gttgtgtgcc tgctgaataa cttctatccc    480

agagaggcca aagtacagtg gaaggtggat aacgccctcc aatcgggtaa ctcccaggag    540

agtgtcacag agcaggacag caaggacagc acctacagcc tcagcagcac cctgacgctg    600

agcaaagcag actacgagaa acacaaagtc tacgcctgcg aagtcaccca tcagggcctg    660

agctcgcccg tcacaaagag cttcaacagg ggagagtgt                            699
```

<210> 40
<211> 233
<212> PRT
<213> Homo sapiens

<400> 40

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Met Ser Pro Ser Gln Leu Ile Gly Phe Leu Leu Leu Trp Val Pro Ala
1               5                   10                  15

Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val
            20                  25                  30

Thr Pro Lys Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile
        35                  40                  45

Gly Ser Ser Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys
    50                  55                  60
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Leu Leu Ile Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg
65                  70                  75                  80

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser
                85                  90                  95

Leu Glu Ala Glu Asp Ala Ala Ala Tyr Tyr Cys His Gln Ser Ser Ser
            100                 105                 110

Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr
        115                 120                 125

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
    130                 135                 140

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

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
                165                 170                 175

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
            180                 185                 190

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
        195                 200                 205

Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
    210                 215                 220

Thr Lys Ser Phe Asn Arg Gly Glu Cys
225                 230
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<210> 41
<211> 5
<212> PRT
<213> Homo sapiens

<400> 41

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Leu Ser Asp Ile Ala
1               5
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<210> 42
<211> 4
<212> PRT
<213> Homo sapiens

<400> 42

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Val Ile Asp Glu
1
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<210> 43
<211> 4
<212> PRT
<213> Homo sapiens

<400> 43

Thr Cys Phe Ala
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<210> 44
<211> 24
<212> DNA
<213> Artificial

<220>
<223> oligonucleotide primer for PCR

<220>
<221> misc_feature
<222> (18)..(23)
<223> n is a, c, t, or g

<400> 44
ggccggatag gcctccannn nnnt 24

<210> 45
<211> 26
<212> DNA
<213> artificial

<220>
<223> oligonucleotide primer for PCR

<400> 45
ggacactgac atggactgaa ggagta 26

<210> 46
<211> 26
<212> DNA
<213> artificial

<220>
<223> oligonucleotide primer for PCR

<400> 46
ggacactgac atggactgaa ggagta 26

<210> 47
<211> 46
<212> DNA
<213> artificial

<220>
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<400> 47
cagcagaagc ttctagacca ccatgtcgcc atcacaactc attggg 46

<210> 48
<211> 34
<212> DNA

<213> artificial

<220>
<223> oligonucleotide primer for PCR

<400> 48
cttgtcgact caacactctc ccctgttgaa gctc 34

<210> 49
<211> 8
<212> PRT
<213> artificial

<220>
<223> amino acid sequence encoded by 5' anti-IL-1R1 15C4 kappa primer

<400> 49

Met Ser Pro Ser Gln Leu Ile Gly
1 5

<210> 50
<211> 7
<212> PRT
<213> artificial

<220>
<223> amino acid sequence encoded by 3' anti-IL-1R1 15C4 kappa primer

<400> 50

Cys Glu Gly Arg Asn Phe Ser
1 5

<210> 51
<211> 1409
<212> DNA
<213> Homo sapiens

<400> 51
tctagaccac catggacatc aggctcagct tagttttcct tgtccttttc ataaaaggtg 60

tccagtgtga ggtagaactg gtggagtctg ggggcggctt agtacaacct ggaaggtcca 120

tgacactctc ctgtgcagcc tcgggattca ctttcagaac ctatggcatg gcctgggtcc 180

gccaggcccc aacgaagggt ctggagtggg tctcatcaat tactgctagt ggtggtacca 240

cctactatcg agactccgtg aagggccgct tcactatttt tagggataat gcaaaaagta 300

ccctatacct gcagatggac agtccgaggt ctgaggacac ggccacttat ttctgtacat 360

caatttcgga atactggggc cacggagtca tggtcaccgt ctctagtgcc tccaccaagg 420

gcccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc acagcggccc 480

tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg aactcaggcg 540

ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga ctctactccc 600

tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac atctgcaacg 660

tgaatcacaa gcccagcaac accaaggtgg acaagaaagt tgagcccaaa tcttgtgaca 720

aaactcacac atgcccaccg tgcccagcac ctgaactcct gggggggaccg tcagtcttcc 780

tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag gtcacatgcg 840

tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac gtggacggcg 900

tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc acgtaccgtg 960

tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag tacaagtgca 1020

aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa gccaaagggc 1080

agccccgaga accacaggtg tacaccctgc ccccatcccg ggatgagctg accaagaacc 1140

aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc gtggagtggg 1200

agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg gactccgacg 1260

gctccttctt cctctatagc aagctcaccg tggacaagag caggtggcag caggggaacg 1320

tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag aagagcctct 1380

ccctgtctcc gggtaaatga taagtcgac 1409

<210> 52
<211> 19
<212> DNA
<213> artificial

<220>
<223> oligonucleotide primer for PCR

<400> 52
tgaggacgct gaccacacg 19

<210> 53
<211> 44
<212> DNA
<213> artificial

<220>
<223> oligonucleotide primer for PCR

<400> 53
cagcagaagc ttctagacca ccatggggtc aaccgccatc ctcg 44

<210> 54
<211> 32
<212> DNA
<213> artificial

<220>

<223> oligonucleotide primer for PCR

<400> 54
gtggaggcac tagagacggt gaccagggtt cc 32

<210> 55
<211> 7
<212> PRT
<213> artificial

<220>
<223> amino acid sequence encoded by 5' anti-IL-1R1 15C4 heavy chain primer

<400> 55

Met Gly Ser Thr Ala Ile Leu
1 5

<210> 56
<211> 11
<212> PRT
<213> artificial

<220>
<223> amino acid sequence encoded by 3' anti-IL-1R1 15C4 heavy chain primer

<400> 56

Thr Ser Ala Ser Ser Val Thr Val Leu Thr Gly
1 5 10

<210> 57
<211> 1415
<212> DNA
<213> homo sapiens

<400> 57
tctagaccac catggacatg agggtccccg ctcagctcct ggggctcctg ctattgtggt 60

tgagaggtgc cagatgtgag gtccagctgg tgcagtctgg gggaggcttg gtacatcctg 120

gggggtccct gagactctcc tgtgcaggct ctggattcac cttcagtggc catgctttgc 180

actgggttcg ccaggctcca ggaaaaggtc tggagtgggt atcaggtatt ggtactcatg 240

gtgggacata ctatgcagac tccgtgaagg gccgattcac catctccaga gacaatgcca 300

agaactcctt gtttcttcaa atgaacagcc tgagcgccga ggacatggct gtgtattact 360

gtacaagaag aaactgggga caatttgact actggggcca gggaaccctg gtcaccgtct 420

ctagtgcctc caccaagggc ccatcggtct tccccctggc gccctgctcc aggagcacct 480

ccgagagcac agcggccctg ggctgcctgg tcaaggacta cttccccgaa ccggtgacgg 540

tgtcgtggaa ctcaggcgct ctgaccagcg gcgtgcacac cttcccagct gtcctacagt 600

cctcaggact ctactccctc agcagcgtgg tgaccgtgcc ctccagcaac ttcggcaccc 660

agacctacac ctgcaacgta gatcacaagc ccagcaacac caaggtggac aagacagttg 720

agcgcaaatg ttgtgtcgag tgcccaccgt gcccagcacc acctgtggca ggaccgtcag 780

tcttcctctt ccccccaaaa cccaaggaca ccctcatgat ctcccggacc cctgaggtca 840

cgtgcgtggt ggtggacgtg agccacgaag accccgaggt ccagttcaac tggtacgtgg 900

acggcgtgga ggtgcataat gccaagacaa agccacggga ggagcagttc aacagcacgt 960

tccgtgtggt cagcgtcctc accgttgtgc accaggactg gctgaacggc aaggagtaca 1020

agtgcaaggt ctccaacaaa ggcctcccag ccccatcga gaaaaccatc tccaaaacca 1080

aagggcagcc ccgagaacca caggtgtaca ccctgccccc atcccgggag gagatgacca 1140

agaaccaggt cagcctgacc tgcctggtca aaggcttcta ccccagcgac atcgccgtgg 1200

agtgggagag caatgggcag ccggagaaca actacaagac cacacctccc atgctggact 1260

ccgacggctc cttcttcctc tacagcaagc tcaccgtgga caagagcagg tggcagcagg 1320

ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac acgcagaaga 1380

gcctctccct gtctccgggt aaatgataag tcgac 1415

<210> 58
<211> 1418
<212> DNA
<213> Homo sapiens

<400> 58
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tgagaggtgc cagatgtgag gtccagctgg tgcagtctgg gggaggcttg gtacatcctg 120

gggggtccct gagactctcc tgtgcaggct ctggattcac cttcagtggc catgctttgc 180

actgggttcg ccaggctcca ggaaaaggtc tggagtgggt atcaggtatt ggtactcatg 240

gtgggacata ctatgcagac tccgtgaagg gccgattcac catctccaga gacaatgcca 300

agaactcctt gtttcttcaa atgaacagcc tgagcgccga ggacatggct gtgtattact 360

gtacaagaag aaactgggga caatttgact actggggcca gggaaccctg gtcaccgtct 420

ctagtgccag caccaagggg ccatccgtct tccccctggc gccctgctcc aggagcacct 480

ccgagagcac agccgccctg ggctgcctgg tcaaggacta cttccccgaa ccggtgacgg 540

tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac cttcccggct gtcctacagt 600

cctcaggact ctactccctc agcagcgtgg tgaccgtgcc ctccagcagc ttgggcacga 660

agacctacac ctgcaacgta gatcacaagc ccagcaacac caaggtggac aagagagttg 720

agtccaaata tggtcccca tgcccatcat gcccagcacc tgagttcctg gggggaccat 780

cagtcttcct gttcccccca aaacccaagg acactctcat gatctcccgg acccctgagg 840

tcacgtgcgt ggtggtggac gtgagccagg aagaccccga ggtccagttc aactggtacg 900

tggatggcgt ggaggtgcat aatgccaaga caaagccgcg ggaggagcag ttcaacagca 960

cgtaccgtgt ggtcagcgtc ctcaccgtcc tgcaccagga ctggctgaac ggcaaggagt 1020

acaagtgcaa ggtctccaac aaaggcctcc cgtcctccat cgagaaaacc atctccaaag 1080

ccaaagggca gccccgagag ccacaggtgt acaccctgcc cccatcccag gaggagatga 1140

ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt ctaccccagc gacatcgccg 1200

tggagtggga gagcaatggg cagccggaga acaactacaa gaccacgcct cccgtgctgg 1260

actccgacgg ctccttcttc ctctacagca ggctaaccgt ggacaagagc aggtggcagg 1320

aggggaatgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac tacacacaga 1380

agagcctctc cctgtctctg ggtaaatgat aagtcgac 1418

<210> 59
<211> 485
<212> PRT
<213> Homo sapiens

<400> 59

Met Val His Ala Thr Ser Pro Leu Leu Leu Leu Leu Leu Leu Ser Leu
1 5 10 15

Ala Leu Val Ala Pro Gly Leu Ser Ala Arg Lys Cys Ser Leu Thr Gly
20 25 30

Lys Trp Thr Asn Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn
35 40 45

Ser Lys Gly Glu Phe Thr Gly Thr Tyr Thr Thr Ala Val Thr Ala Thr
50 55 60

Ser Asn Glu Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile
65 70 75 80

Asn Lys Arg Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe
85 90 95

Ser Glu Ser Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn
100 105 110

Gly Lys Glu Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn
115 120 125

Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe
130 135 140

Thr Arg Leu Arg Thr Gln Lys Glu Gln Leu Leu Ala Ser Leu Leu Glu
145 150 155 160

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Ala Asp Lys Cys Lys Glu Arg Glu Glu Lys Ile Ile Leu Val Ser Ser
                 165                 170                 175

Ala Asn Glu Ile Asp Val Arg Pro Cys Pro Leu Asn Pro Asn Glu His
            180                 185                 190

Lys Gly Thr Ile Thr Trp Tyr Lys Asp Asp Ser Lys Thr Pro Val Ser
        195                 200                 205

Thr Glu Gln Ala Ser Arg Ile His Gln His Lys Glu Lys Leu Trp Phe
    210                 215                 220

Val Pro Ala Met Val Glu Asp Ser Gly His Tyr Tyr Cys Val Val Arg
225                 230                 235                 240

Asn Ser Ser Tyr Cys Leu Arg Ile Lys Ile Ser Ala Lys Phe Val Glu
                245                 250                 255

Asn Glu Pro Asn Leu Cys Tyr Asn Ala Gln Ala Ile Phe Lys Gln Lys
            260                 265                 270

Leu Pro Val Ala Gly Asp Gly Gly Leu Val Cys Pro Tyr Met Glu Phe
        275                 280                 285

Phe Lys Asn Glu Asn Asn Glu Leu Pro Lys Leu Gln Trp Tyr Lys Asp
    290                 295                 300

Cys Lys Pro Leu Leu Leu Asp Asn Ile His Phe Ser Gly Val Lys Asp
305                 310                 315                 320

Arg Leu Ile Val Met Asn Val Ala Glu Lys His Arg Gly Asn Tyr Thr
                325                 330                 335

Cys His Ala Ser Tyr Thr Tyr Leu Gly Lys Gln Tyr Pro Ile Thr Arg
            340                 345                 350

Val Ile Glu Phe Ile Thr Leu Glu Glu Asn Lys Pro Thr Arg Pro Val
        355                 360                 365

Ile Val Ser Pro Ala Asn Glu Thr Met Glu Val Asp Leu Gly Ser Gln
    370                 375                 380

Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Leu Ser Asp Ile Ala Tyr
385                 390                 395                 400

Trp Lys Trp Asn Gly Ser Val Ile Asp Glu Asp Asp Pro Val Leu Gly
                405                 410                 415

Glu Asp Tyr Tyr Ser Val Glu Asn Pro Ala Asn Lys Arg Arg Ser Thr
            420                 425                 430

Leu Ile Thr Val Leu Asn Ile Ser Glu Ile Glu Ser Arg Phe Tyr Lys
        435                 440                 445

His Pro Phe Thr Cys Phe Ala Lys Asn Thr His Gly Ile Asp Ala Ala
    450                 455                 460

Tyr Ile Gln Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys Asp Tyr Lys
465                 470                 475                 480
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Asp Asp Asp Asp Lys
485

<210> 60
<211> 485
<212> PRT
<213> artificial

<220>
<223> avidin-cynomolgus IL-1R1-FLAG chimeric protein

<400> 60

Met Val His Ala Thr Ser Pro Leu Leu Leu Leu Leu Leu Ser Leu
1 5 10 15

Ala Leu Val Ala Pro Gly Leu Ser Ala Arg Lys Cys Ser Leu Thr Gly
20 25 30

Lys Trp Thr Asn Asp Leu Gly Ser Asn Met Thr Ile Gly Ala Val Asn
35 40 45

Ser Lys Gly Glu Phe Thr Gly Thr Tyr Thr Thr Ala Val Thr Ala Thr
50 55 60

Ser Asn Glu Ile Lys Glu Ser Pro Leu His Gly Thr Gln Asn Thr Ile
65 70 75 80

Asn Lys Arg Thr Gln Pro Thr Phe Gly Phe Thr Val Asn Trp Lys Phe
85 90 95

Ser Glu Ser Thr Thr Val Phe Thr Gly Gln Cys Phe Ile Asp Arg Asn
100 105 110

Gly Lys Glu Val Leu Lys Thr Met Trp Leu Leu Arg Ser Ser Val Asn
115 120 125

Asp Ile Gly Asp Asp Trp Lys Ala Thr Arg Val Gly Ile Asn Ile Phe
130 135 140

Thr Arg Leu Arg Thr Gln Lys Glu Gln Leu Leu Ala Ser Leu Leu Glu
145 150 155 160

Ala Asp Lys Cys Asn Glu Arg Glu Glu Lys Ile Ile Leu Val Ser Ser
165 170 175

Ala Asn Glu Ile Asp Val Arg Pro Cys Pro Leu Asn Pro Asn Glu Tyr
180 185 190

Lys Gly Thr Ile Thr Trp Tyr Lys Asn Asp Ser Lys Thr Pro Ile Ser
195 200 205

Thr Glu Gln Ala Ser Arg Ile His Gln His Lys Lys Lys Leu Trp Phe
210 215 220

Val Pro Ala Lys Val Glu Asp Ser Gly His Tyr Tyr Cys Val Val Arg
225 230 235 240

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

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                245                 250                 255

Asn Glu Pro Asn Leu Cys Tyr Asn Ala Glu Ala Ile Phe Lys Gln Arg
            260                 265                 270

Leu Pro Val Ala Gly Asp Gly Gly Leu Val Cys Pro Tyr Met Glu Phe
        275                 280                 285

Phe Lys Asp Glu Asn Asn Glu Leu Pro Lys Leu Leu Trp Tyr Lys Asp
    290                 295                 300

Cys Lys Pro Leu Leu Leu Asp Asn Ile His Phe Ser Gly Val Lys Asp
305                 310                 315                 320

Arg Leu Ile Val Met Asn Val Ala Glu Lys His Arg Gly Asn Tyr Thr
                325                 330                 335

Cys His Ala Ser Tyr Thr Tyr Leu Gly Lys Gln Tyr Pro Ile Thr Arg
            340                 345                 350

Val Ile Glu Phe Ile Thr Leu Glu Glu Asn Lys Pro Thr Arg Pro Val
        355                 360                 365

Ile Val Ser Pro Ala Asn Glu Thr Ile Glu Val Asp Leu Gly Ser Gln
    370                 375                 380

Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Leu Ser Asp Thr Ala Tyr
385                 390                 395                 400

Trp Lys Trp Asn Gly Ser Phe Ile Asp Glu Asp Asp Pro Val Leu Gly
                405                 410                 415

Glu Asp Tyr Tyr Ser Val Glu Asn Pro Ala Asn Lys Arg Arg Ser Thr
            420                 425                 430

Leu Ile Thr Val Leu Asn Ile Ser Glu Thr Glu Ser Arg Phe Tyr Lys
        435                 440                 445

His Pro Phe Thr Cys Leu Ala Arg Asn Thr His Gly Met Asp Ala Ala
    450                 455                 460

Tyr Val Gln Leu Ile Tyr Pro Val Thr Lys Phe Gln Lys Asp Tyr Lys
465                 470                 475                 480

Asp Asp Asp Asp Lys
                485

<210>  61
<211>  5
<212>  PRT
<213>  Homo sapiens

<400>  61

Asn Tyr Gly Met His
1               5

<210>  62
<211>  8
<212>  PRT
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<213> Homo sapiens

<400> 62

Thr Phe Ser Asn Tyr Gly Met His
1 5

<210> 63
<211> 5
<212> PRT
<213> Homo sapiens

<400> 63

Phe His Trp Ile Ala
1 5

<210> 64
<211> 17
<212> PRT
<213> Homo sapiens

<400> 64

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

Gly

<210> 65
<211> 17
<212> PRT
<213> Homo sapiens

<400> 65

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

Gly

<210> 66
<211> 17
<212> PRT
<213> Homo sapiens

<400> 66

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

Gly

<210> 67
<211> 11
<212> PRT
<213> Homo sapiens

<400> 67

Ala Arg Ser Phe Asp Trp Leu Leu Phe Glu Phe
1 5 10

<210> 68
<211> 11
<212> PRT
<213> Homo sapiens

<400> 68

Gly Arg Tyr Phe Asp Trp Leu Leu Phe Glu Tyr
1 5 10

<210> 69
<211> 9
<212> PRT
<213> Homo sapiens

<400> 69

Gln Arg Glu Leu Asp Tyr Phe Asp Tyr
1 5

<210> 70
<211> 11
<212> PRT
<213> Homo sapiens

<400> 70

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

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

<400> 71

Arg Ala Ser Gln Ser Ile Gly Ser Ser Leu His
1 5 10

<210> 72
<211> 7
<212> PRT
<213> Homo sapiens

<400> 72

Asp Ala Ser Asn Arg Ala Thr
1 5

<210> 73
<211> 7
<212> PRT
<213> Homo sapiens

<400> 73

Tyr Ala Ser Gln Ser Phe Ser
1 5

<210> 74
<211> 10
<212> PRT
<213> Homo sapiens

<400> 74

Gln Gln Arg Ser Asn Trp Pro Pro Leu Thr
1 5 10

<210> 75
<211> 9
<212> PRT
<213> Homo sapiens

<400> 75

His Gln Ser Ser Ser Leu Pro Leu Thr
1 5

<210> 76
<211> 111
<212> PRT
<213> Homo sapiens

<400> 76

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

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

Ala Tyr Trp Lys Trp Asn Gly Ser Val Ile Asp Glu Asp Asp Pro Val
35 40 45

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

Ser Thr Leu Ile Thr Val Leu Asn Ile Ser Glu Ile Glu Ser Arg Phe
65 70 75 80

Tyr Lys His Pro Phe Thr Cys Phe Ala Lys Asn Thr His Gly Ile Asp
85 90 95

Ala Ala Tyr Ile Gln Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys
100 105 110

<210> 77
<211> 350
<212> DNA
<213> Homo sapiens

<400> 77

cctgtgattg tgagcccagc taatgagaca atggaagtag acttgggatc ccagatacaa 60

ttgatctgta atgtcaccgg ccagttgagt gacattgctt actggaagtg gaatgggtca 120

gtaattgatg aagatgaccc agtgctaggg gaagactatt acagtgtgga aaatcctgca 180

aacaaaagaa ggagtaccct catcacagtg cttaatatat cggaaattga aagtagattt 240

tataaacatc catttacctg ttttgccaag aatacacatg gtatagatgc agcatatatc 300

cagttaatat atccagtcac taatttccag aagcacatga ttggtatatg 350

<210> 78
<211> 350
<212> DNA
<213> Rattus sp.

<400> 78
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ctgatctgca acgtcacggg ccagttcacc gaccttgtct actggaagtg gaatgggtcg 120

gaaattgaat gggacgatcc aatcctagcc gaagactatc agtttttgga acacccttca 180

gccaaaagaa agtacactct cattacaaca cttaacgttt cagaggtcaa aagccagttt 240

tatcgctatc cgttcatctg cttcgttaag aacactcata ttctggagac tgcacacgta 300

cggttagtat acccagttcc tgacttcaag aattacctca tcgggggctt 350

<210> 79
<211> 111
<212> PRT
<213> Rattus sp.

<400> 79

Pro Val Ile Met Ser Pro Arg Asn Glu Thr Met Glu Ala Asp Pro Gly
1 5 10 15

Ser Thr Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Phe Thr Asp Leu
20 25 30

Val Tyr Trp Lys Trp Asn Gly Ser Glu Ile Glu Trp Asp Asp Pro Ile
35 40 45

Leu Ala Glu Asp Tyr Gln Phe Leu Glu His Pro Ser Ala Lys Arg Lys
50 55 60

Tyr Thr Leu Ile Thr Thr Leu Asn Val Ser Glu Val Lys Ser Gln Phe
65 70 75 80

Tyr Arg Tyr Pro Phe Ile Cys Phe Val Lys Asn Thr His Ile Leu Glu
85 90 95

Thr Ala His Val Arg Leu Val Tyr Pro Val Pro Asp Phe Lys Lys
100 105 110