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<130> 13070 WO

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<170> PatentIn version 3.5

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Leu Gly Phe Tyr Asp Ile Pro Glu Leu His Phe Leu Phe Phe Ile Val
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Phe Thr Ala Val Tyr Val Phe Ile Ile Ile Gly Asn Met Leu Ile Ile
35 40 45

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

Leu Ala Asn Leu Ser Phe Leu Asp Ile Leu Tyr Thr Ser Ala Val Met
65 70 75 80

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Pro Lys Met Leu Glu Gly Phe Leu Gln Glu Ala Thr Ile Ser Val Ala
                85                  90                  95

Gly Cys Leu Leu Gln Phe Phe Ile Phe Gly Ser Leu Ala Thr Ala Glu
            100                 105                 110

Cys Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys
        115                 120                 125

Tyr Pro Leu His Tyr Pro Leu Leu Met Gly Pro Arg Arg Tyr Met Gly
    130                 135                 140

Leu Val Val Thr Thr Trp Leu Ser Gly Phe Val Val Asp Gly Leu Val
145                 150                 155                 160

Val Ala Leu Val Ala Gln Leu Arg Phe Cys Gly Pro Asn His Ile Asp
                165                 170                 175

Gln Phe Tyr Cys Asp Phe Met Leu Phe Val Gly Leu Ala Cys Ser Asp
            180                 185                 190

Pro Arg Val Ala Gln Val Thr Thr Leu Ile Leu Ser Val Phe Cys Leu
        195                 200                 205

Thr Ile Pro Phe Gly Leu Ile Leu Thr Ser Tyr Ala Arg Ile Val Val
    210                 215                 220

Ala Val Leu Arg Val Pro Ala Gly Ala Ser Arg Arg Arg Ala Phe Ser
225                 230                 235                 240

Thr Cys Ser Ser His Leu Ala Val Val Thr Thr Phe Tyr Gly Thr Leu
                245                 250                 255

Met Ile Phe Tyr Val Ala Pro Ser Ala Val His Ser Gln Leu Leu Ser
            260                 265                 270

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

Val Ile Tyr Thr Met Arg Asn Lys Glu Val His Gln Ala Leu Arg Lys
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305 310 315

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<210> 13

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<400> 13

Met Leu Ala Arg Asn Asn Ser Leu Val Thr Glu Phe Ile Leu Ala Gly
1 5 10 15

Leu Thr Asp His Pro Glu Phe Gln Gln Pro Leu Phe Phe Leu Phe Leu
20 25 30

Val Val Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Ile Leu
35 40 45

Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
50 55 60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
65 70 75 80

Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Tyr Val Gly
85 90 95

Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
100 105 110

Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
130 135 140

Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr
145 150 155 160

Gly Cys Met Leu Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His
165 170 175

Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr

```
            180                 185                 190

Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Met
        195                 200                 205

Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
    210                 215                 220

Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
225                 230                 235                 240

Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
                245                 250                 255

Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
            260                 265                 270

Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
        275                 280                 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
    290                 295                 300

Ile Lys Ile Gln Arg Arg Asn Ile Phe
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<210> 14
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<212> DNA
<213> homo sapiens

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gggaacctgg tcatgttcct cctgatccat gtgagtgcca ccctgcacac acccatgtac      180

tccctcctga agagcctctc cttcttggat ttctgctact cctccacggt tgtgccccag      240

accctggtga acttcttggc caagaggaaa gtgatctctt attttggctg catgactcag      300
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gaccgctatg ccgctatttg taacccctg ctctactcaa ccatcatgtc tcctgaggtc 420

tgtgcctcgc tgattgtggg ctcctacagt gcaggattcc tcaattctct tatccacact 480

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atttttgctg gtttcaacct tttgagctgc accctcacca tcttgatctc ctacttctta 660

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tgtgcatccc acctcactgc catctgcctc ttctttggca caacactttt tatgtacctg 780

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

Gly Met Tyr Thr Ala Thr Leu Leu Gly Asn Leu Val Met Phe Leu Leu
35 40 45

Ile His Val Ser Ala Thr Leu His Thr Pro Met Tyr Ser Leu Leu Lys
50 55 60

Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Thr Val Val Pro Gln
65 70 75 80

Thr Leu Val Asn Phe Leu Ala Lys Arg Lys Val Ile Ser Tyr Phe Gly

```
                85                  90                  95

Cys Met Thr Gln Met Phe Phe Tyr Ala Gly Phe Ala Thr Ser Glu Cys
            100                 105                 110

Tyr Leu Ile Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn
        115                 120                 125

Pro Leu Leu Tyr Ser Thr Ile Met Ser Pro Glu Val Cys Ala Ser Leu
    130                 135                 140

Ile Val Gly Ser Tyr Ser Ala Gly Phe Leu Asn Ser Leu Ile His Thr
145                 150                 155                 160

Gly Cys Ile Phe Ser Leu Lys Phe Cys Gly Ala His Val Val Thr His
                165                 170                 175

Phe Phe Cys Asp Gly Pro Pro Ile Leu Ser Leu Ser Cys Val Asp Thr
            180                 185                 190

Ser Leu Cys Glu Ile Leu Leu Phe Ile Phe Ala Gly Phe Asn Leu Leu
        195                 200                 205

Ser Cys Thr Leu Thr Ile Leu Ile Ser Tyr Phe Leu Ile Leu Asn Thr
    210                 215                 220

Ile Leu Lys Met Ser Ser Ala Gln Gly Arg Phe Lys Ala Phe Ser Thr
225                 230                 235                 240

Cys Ala Ser His Leu Thr Ala Ile Cys Leu Phe Phe Gly Thr Thr Leu
                245                 250                 255

Phe Met Tyr Leu Arg Pro Arg Ser Ser Tyr Ser Leu Thr Gln Asp Arg
            260                 265                 270

Thr Val Ala Val Ile Tyr Thr Val Val Ile Pro Val Leu Asn Pro Leu
        275                 280                 285
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Met Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Ile Lys Val
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Trp Gly Arg Lys Thr Met Glu
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<213> homo sapiens

<400> 17

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Leu Thr Gln Gln Ala Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
            20                  25                  30

Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Leu Leu
        35                  40                  45

Ile Ala Val Ser Pro Leu Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
    50                  55                  60

Ser Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
65                  70                  75                  80

Met Leu Val Asn Phe Leu Gly Lys Lys Asn Thr Ile Leu Tyr Ser Glu
                85                  90                  95

Cys Met Val Gln Leu Phe Phe Phe Val Val Phe Val Val Ala Glu Gly
            100                 105                 110

Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
        115                 120                 125

Pro Leu Leu Tyr Asn Ala Ile Met Ser Ser Trp Val Cys Ser Leu Leu
    130                 135                 140

Val Leu Ala Ala Phe Phe Leu Gly Phe Leu Ser Ala Leu Thr His Thr
145                 150                 155                 160

Ser Ala Met Met Lys Leu Ser Phe Cys Lys Ser His Ile Ile Asn His
                165                 170                 175

Tyr Phe Cys Asp Val Leu Pro Leu Leu Asn Leu Ser Cys Ser Asn Thr
            180                 185                 190
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```
His Leu Asn Glu Leu Leu Leu Phe Ile Ile Ala Gly Phe Asn Thr Leu
        195                 200                 205

Val Pro Thr Leu Ala Val Ala Val Ser Tyr Ala Phe Ile Leu Tyr Ser
    210                 215                 220

Ile Leu His Ile Arg Ser Ser Glu Gly Arg Ser Lys Ala Phe Gly Thr
225                 230                 235                 240

Cys Ser Ser His Leu Met Ala Val Val Ile Phe Phe Gly Ser Ile Thr
                245                 250                 255

Phe Met Tyr Phe Lys Pro Pro Ser Ser Asn Ser Leu Asp Gln Glu Lys
            260                 265                 270

Val Ser Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu
        275                 280                 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Arg Lys Val
    290                 295                 300

Leu Val Gly Lys
305
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<213> homo sapiens

<400> 18

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gcctggaacc tctccctcat tgttttaata aggatggatt cccacctcca tacacccatg      180

tatttcttcc tcagtaacct gtccttcata gatgtctgct atatcagctc cacagtcccc      240

aagatgctct ccaacctctt acaggaacag caaactatca cttttgttgg ttgtattatt      300

cagtacttta tcttttcaac gatgggactg agtgagtctt gtctcatgac agccatggct      360

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<400> 19

Met Thr Gly Gly Gly Asn Ile Thr Glu Ile Thr Tyr Phe Ile Leu Leu
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Gly Phe Ser Asp Phe Pro Arg Ile Ile Lys Val Leu Phe Thr Ile Phe
20 25 30

Leu Val Ile Tyr Ile Thr Ser Leu Ala Trp Asn Leu Ser Leu Ile Val
35 40 45

Leu Ile Arg Met Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ser Asn Leu Ser Phe Ile Asp Val Cys Tyr Ile Ser Ser Thr Val Pro
65 70 75 80

Lys Met Leu Ser Asn Leu Leu Gln Glu Gln Gln Thr Ile Thr Phe Val
85 90 95

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Gly Cys Ile Ile Gln Tyr Phe Ile Phe Ser Thr Met Gly Leu Ser Glu
            100                 105                 110

Ser Cys Leu Met Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
        115                 120                 125

Asn Pro Leu Leu Tyr Ser Ser Ile Met Ser Pro Thr Leu Cys Val Trp
    130                 135                 140

Met Val Leu Gly Ala Tyr Met Thr Gly Leu Thr Ala Ser Leu Phe Gln
145                 150                 155                 160

Ile Gly Ala Leu Leu Gln Leu His Phe Cys Gly Ser Asn Val Ile Arg
                165                 170                 175

His Phe Phe Cys Asp Met Pro Gln Leu Leu Ile Leu Ser Cys Thr Asp
            180                 185                 190

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

Ile Ala Ser Ala Leu Val Ile Met Ile Ser Tyr Gly Tyr Ile Gly Ile
    210                 215                 220

Ser Ile Met Lys Ile Thr Ser Ala Lys Gly Arg Ser Lys Ala Phe Asn
225                 230                 235                 240

Thr Cys Ala Ser His Leu Thr Ala Val Ser Leu Phe Tyr Thr Ser Gly
                245                 250                 255

Ile Phe Val Tyr Leu Ser Ser Ser Ser Gly Gly Ser Ser Ser Phe Asp
            260                 265                 270

Arg Phe Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
        275                 280                 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu Lys Arg
    290                 295                 300
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Leu Gln Lys Arg Lys Cys Cys
305 310

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<212> DNA
<213> homo sapiens

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<400> 21

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

Ile Phe Leu Gly Met Tyr Leu Val Thr Met Val Gly Asn Leu Leu Ile
        35                  40                  45

Ile Leu Ala Ile Ser Ser Asp Pro His Leu His Thr Pro Met Tyr Phe
    50                  55                  60

Phe Leu Ala Asn Leu Ser Leu Thr Asp Ala Cys Phe Thr Ser Ala Ser
65                  70                  75                  80

Ile Pro Lys Met Leu Ala Asn Ile His Thr Gln Ser Gln Ile Ile Ser
                85                  90                  95

Tyr Ser Gly Cys Leu Ala Gln Leu Tyr Phe Leu Leu Met Phe Gly Gly
            100                 105                 110

Leu Asp Asn Cys Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala
        115                 120                 125

Ile Cys Gln Pro Leu His Tyr Ser Thr Ser Met Ser Pro Gln Leu Cys
    130                 135                 140

Ala Leu Met Leu Gly Val Cys Trp Val Leu Thr Asn Cys Pro Ala Leu
145                 150                 155                 160

Met His Thr Leu Leu Leu Thr Arg Val Ala Phe Cys Ala Gln Lys Ala
                165                 170                 175

Ile Pro His Phe Tyr Cys Asp Pro Ser Ala Leu Leu Lys Leu Ala Cys
            180                 185                 190

Ser Asp Thr His Val Asn Glu Leu Met Ile Ile Thr Met Gly Leu Leu
        195                 200                 205
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```
Phe Leu Thr Val Pro Leu Leu Leu Ile Val Phe Ser Tyr Val Arg Ile
    210                 215                 220

Phe Trp Ala Val Phe Gly Ile Ser Ser Pro Gly Gly Arg Trp Lys Ala
225                 230                 235                 240

Phe Ser Thr Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly
                245                 250                 255

Ser Leu Met Gly Val Tyr Leu Leu Pro Pro Ser Thr Tyr Ser Thr Glu
            260                 265                 270

Arg Glu Ser Arg Ala Ala Val Leu Tyr Met Val Ile Ile Pro Met Leu
        275                 280                 285

Asn Pro Phe Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu
    290                 295                 300

Gly Lys Leu Phe Val Ser Gly Lys Thr Phe Phe Leu
305                 310                 315
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<210> 22
<211> 948
<212> DNA
<213> homo sapiens

<400> 22

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atgtccataa ccaaagcctg gaacagctca tcagtgacca tgttcatcct cctgggattc       60

acagaccatc cagaactcca ggccctcctc tttgtgacct tcctgggcat ctatcttacc      120

accctggcct ggaacctggc cctcattttt ctgatcagag gtgacaccca tctgcacaca      180

cccatgtact tcttcctaag caacttatct ttcattgaca tctgctactc ttctgctgtg      240

gctcccaata tgctcactga cttcttctgg gagcagaaga ccatatcatt tgtgggctgt      300

gctgctcagt ttttttttctt tgtcggcatg ggtctgtctg agtgcctcct cctgactgct      360

atggcatacg accgatatgc agccatctcc agccccttc tctaccccac tatcatgacc      420

cagggcctct gtacacgcat ggtggttggg gcatatgttg gtggcttcct gagctccctg      480
```

atccaggcca gctccatatt taggcttcac ttttgcggac ccaacatcat caaccacttc 540

ttctgcgacc tcccaccagt cctggctctg tcttgctctg acaccttcct cagtcaagtg 600

gtgaatttcc tcgtggtggt cactgtcgga ggaacatcgt tcctccaact ccttatctcc 660

tatggttaca tagtgtctgc ggtcctgaag atcccttcag cagagggccg atggaaagcc 720

tgcaacacgt gtgcctcgca tctgatggtg gtgactctgc tgtttgggac agccctttc 780

gtgtacttgc gacccagctc cagctacttg ctaggcaggg acaaggtggt gtctgttttc 840

tattcattgg tgatccccat gctgaaccct ctcatttaca gtttgaggaa caaagagatc 900

aaggatgccc tgtggaaggt gttggaaagg aagaaagtgt tttcttag 948

<210> 23
<211> 315
<212> PRT
<213> homo sapiens

<400> 23

Met Ser Ile Thr Lys Ala Trp Asn Ser Ser Ser Val Thr Met Phe Ile
1 5 10 15

Leu Leu Gly Phe Thr Asp His Pro Glu Leu Gln Ala Leu Leu Phe Val
20 25 30

Thr Phe Leu Gly Ile Tyr Leu Thr Thr Leu Ala Trp Asn Leu Ala Leu
35 40 45

Ile Phe Leu Ile Arg Gly Asp Thr His Leu His Thr Pro Met Tyr Phe
50 55 60

Phe Leu Ser Asn Leu Ser Phe Ile Asp Ile Cys Tyr Ser Ser Ala Val
65 70 75 80

Ala Pro Asn Met Leu Thr Asp Phe Phe Trp Glu Gln Lys Thr Ile Ser
85 90 95

Phe Val Gly Cys Ala Ala Gln Phe Phe Phe Phe Val Gly Met Gly Leu
100 105 110

```
Ser Glu Cys Leu Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala
        115                 120                 125

Ile Ser Ser Pro Leu Leu Tyr Pro Thr Ile Met Thr Gln Gly Leu Cys
    130                 135                 140

Thr Arg Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Leu
145                 150                 155                 160

Ile Gln Ala Ser Ser Ile Phe Arg Leu His Phe Cys Gly Pro Asn Ile
                165                 170                 175

Ile Asn His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys
            180                 185                 190

Ser Asp Thr Phe Leu Ser Gln Val Val Asn Phe Leu Val Val Val Thr
        195                 200                 205

Val Gly Gly Thr Ser Phe Leu Gln Leu Leu Ile Ser Tyr Gly Tyr Ile
    210                 215                 220

Val Ser Ala Val Leu Lys Ile Pro Ser Ala Glu Gly Arg Trp Lys Ala
225                 230                 235                 240

Cys Asn Thr Cys Ala Ser His Leu Met Val Val Thr Leu Leu Phe Gly
                245                 250                 255

Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
            260                 265                 270

Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
        275                 280                 285

Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
    290                 295                 300

Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
305                 310                 315
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<210> 24
<211> 930
<212> DNA
<213> homo sapiens

<400> 24
atggaaccag agaatgacac agggatttca gaatttgttc ttctgggact ttctgaggaa 60

ccagaattgc agcccttcct ctttgggctg tttctgtcca tgtacctggt cactgtgctc 120

gggaatctgc tcatcatcct ggccacaatc tcagactccc acctccacac ccccatgtac 180

ttcttcctct ccaacctgtc ctttgcagac atctgtttca tctccactac aatcccaaag 240

atgctcatta acatccagac acagagcaga gtcatcacct atgcaggctg catcacccag 300

atgtgctttt ttgtactttt tggagggtta gacagcttac tcctggctgt gatggcctat 360

gatcggtttg tggccatctg tcatcctctg cactacacag tcatcatgaa ccctcggctc 420

tgtggactcc tggttctggc atcctggatg attgctgccc tgaattcctt gtcacaaagc 480

ttaatggtat tgtggctgtc cttctgcaca gacttggaaa tcccccactt tttctgtgaa 540

cttaatcagg tcatccacct tgcctgttct gacacctttc ttaatgacat ggggatgtat 600

tttgcagcag ggctgctggc tggtggtccc cttgtgggga tcctttgctc ttactctaag 660

atagtttcct ccatacgtgc aatctcatca gctcagggga agtacaaggc attttccacc 720

tgtgcatcac acctctcagt tgtctcttta ttttgttgta cgggcctagg tgtgtacctt 780

acttctgctg caacccacaa ctcacacaca agtgcaacag cctcagtgat gtacactgtg 840

gccacccccа tgctgaaccc ctttatctac agtctgagga ataaagacat aaagagggct 900

ctgaaaatgt ccttcagagg aaagcaataa 930

<210> 25
<211> 309
<212> PRT
<213> homo sapiens

<400> 25

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

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Leu Ser Glu Glu Pro Glu Leu Gln Pro Phe Leu Phe Gly Leu Phe Leu
            20                  25                  30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
        35                  40                  45

Thr Ile Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
    50                  55                  60

Asn Leu Ser Phe Ala Asp Ile Cys Phe Ile Ser Thr Thr Ile Pro Lys
65                  70                  75                  80

Met Leu Ile Asn Ile Gln Thr Gln Ser Arg Val Ile Thr Tyr Ala Gly
                85                  90                  95

Cys Ile Thr Gln Met Cys Phe Phe Val Leu Phe Gly Gly Leu Asp Ser
            100                 105                 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
        115                 120                 125

Pro Leu His Tyr Thr Val Ile Met Asn Pro Arg Leu Cys Gly Leu Leu
    130                 135                 140

Val Leu Ala Ser Trp Met Ile Ala Ala Leu Asn Ser Leu Ser Gln Ser
145                 150                 155                 160

Leu Met Val Leu Trp Leu Ser Phe Cys Thr Asp Leu Glu Ile Pro His
                165                 170                 175

Phe Phe Cys Glu Leu Asn Gln Val Ile His Leu Ala Cys Ser Asp Thr
            180                 185                 190

Phe Leu Asn Asp Met Gly Met Tyr Phe Ala Ala Gly Leu Leu Ala Gly
        195                 200                 205

Gly Pro Leu Val Gly Ile Leu Cys Ser Tyr Ser Lys Ile Val Ser Ser
    210                 215                 220
```

```
Ile Arg Ala Ile Ser Ser Ala Gln Gly Lys Tyr Lys Ala Phe Ser Thr
225                 230                 235                 240


Cys Ala Ser His Leu Ser Val Val Ser Leu Phe Cys Cys Thr Gly Leu
                245                 250                 255


Gly Val Tyr Leu Thr Ser Ala Ala Thr His Asn Ser His Thr Ser Ala
            260                 265                 270


Thr Ala Ser Val Met Tyr Thr Val Ala Thr Pro Met Leu Asn Pro Phe
        275                 280                 285


Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Arg Ala Leu Lys Met Ser
    290                 295                 300


Phe Arg Gly Lys Gln
305


<210>  26
<211>  930
<212>  DNA
<213>  homo sapiens

<400>  26
atgaagagaa agaacttcac agaagtgtca gaattcattt tcttgggatt ttctagcttt       60

ggaaagcatc agataaccct ctttgtggtt ttcctaactg tctacatttt aactctggtt      120

gctaacatca tcattgtgac tatcatctgc attgaccatc atctccacac tcccatgtat      180

ttcttcctaa gcatgctggc tagttcagag acggtgtaca cactggtcat tgtgccacga      240

atgcttttga gcctcatttt tcataaccaa cctatctcct tggcaggctg tgctacacaa      300

atgttctttt ttgttatctt ggccactaat aattgcttcc tgcttactgc aatggggtat      360

gaccgctatg tggccatctg cagacccctg agatacactg tcatcatgag caagggacta      420

tgtgcccagc tggtgtgtgg gtcctttggc attggtctga ctatggcagt tctccatgtg      480

acagccatgt tcaatttgcc gttctgtggc acagtggtag accacttctt ttgtgacatt      540

tacccagtca tgaaactttc ttgcattgat accactatca atgagataat aaattatggt      600
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gtaagttcat ttgtgatttt tgtgcccata ggcctgatat ttatctccta tgtccttgtc 660

atctcttcca tccttcaaat tgcctcagct gagggccgga agaagacctt tgccacctgt 720

gtctcccacc tcactgtggt tattgtccac tgtggctgtg cctccattgc ctacctcaag 780

ccgaagtcag aaagttcaat agaaaaagac cttgttctct cagtgacgta caccatcatc 840

actcccttgc tgaaccctgt tgtttacagt ctgagaaaca aggaggtaaa ggatgcccta 900

tgcagagttg tgggcagaaa tatttcttaa 930

<210> 27
<211> 309
<212> PRT
<213> homo sapiens

<400> 27

Met Lys Arg Lys Asn Phe Thr Glu Val Ser Glu Phe Ile Phe Leu Gly
1 5 10 15

Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu
20 25 30

Thr Val Tyr Ile Leu Thr Leu Val Ala Asn Ile Ile Ile Val Thr Ile
35 40 45

Ile Cys Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg
65 70 75 80

Met Leu Leu Ser Leu Ile Phe His Asn Gln Pro Ile Ser Leu Ala Gly
85 90 95

Cys Ala Thr Gln Met Phe Phe Phe Val Ile Leu Ala Thr Asn Asn Cys
100 105 110

Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Arg
115 120 125

```
Pro Leu Arg Tyr Thr Val Ile Met Ser Lys Gly Leu Cys Ala Gln Leu
    130                 135                 140

Val Cys Gly Ser Phe Gly Ile Gly Leu Thr Met Ala Val Leu His Val
145                 150                 155                 160

Thr Ala Met Phe Asn Leu Pro Phe Cys Gly Thr Val Val Asp His Phe
                165                 170                 175

Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Ile Asp Thr Thr
            180                 185                 190

Ile Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Phe Val
        195                 200                 205

Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Val Ile Ser Ser Ile
    210                 215                 220

Leu Gln Ile Ala Ser Ala Glu Gly Arg Lys Lys Thr Phe Ala Thr Cys
225                 230                 235                 240

Val Ser His Leu Thr Val Val Ile Val His Cys Gly Cys Ala Ser Ile
                245                 250                 255

Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Ile Glu Lys Asp Leu Val
            260                 265                 270

Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val
        275                 280                 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Val Val
    290                 295                 300

Gly Arg Asn Ile Ser
305
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<210> 28

<211> 945
<212> DNA
<213> homo sapiens

<400> 28
atggaaaaaa gaaatctaac agttgtcagg gaattcgtcc ttctgggact tcctagctca 60

gcagagcagc agcacctcct gtctgtgctc tttctctgta tgtatttagc caccaccttg 120

gggaacatgc tcatcattgc gacgattggc tttgactctc acctccattc ccctatgtac 180

ttcttcctta gtaacttggc ctttgttgac atctgcttta cgtcgactac agtcccccaa 240

atggtagtga atatcttgac tggcaccaag actatctctt ttgcaggctg cctcacccag 300

ctcttcttct tcgtttcttt tgtgaatatg gacagcctcc ttctgtgtgt gatggcgtat 360

gatagatatg tggcgatttg ccacccctta cattacaccg ccagaatgaa cctgtgcctt 420

tgtgtccagc tagtggctgg actgtggctt gttacttacc tccacgccct cctgcatact 480

gtcctaatag cacagctgtc cttctgtgcc tccaatatca tccatcattt cttctgtgat 540

ctcaatcctc tcctgcagct ctcttgctct gacgtctcct tcaatgtaat gatcattttt 600

gcagtaggag gtctattggc tctcacgccc cttgtctgta tcctcgtatc ttatggactt 660

atcttctcca ctgttctgaa gatcacctct actcagggca agcagagagc tgtttccacc 720

tgcagctgcc acctgtcagt ggtggtgttg ttttacggca cagccatcgc cgtctatttc 780

agcccttcat ccccccatat gcctgagagc gacactctgt caaccatcat gtattcaatg 840

gtggctccga tgctgaatcc tttcatctat accctaagga acagggatat gaagagggga 900

cttcagaaaa tgcttctcaa gtgcacagtc tttcagcagc aataa 945

<210> 29
<211> 314
<212> PRT
<213> homo sapiens

<400> 29

Met Glu Lys Arg Asn Leu Thr Val Val Arg Glu Phe Val Leu Leu Gly
1 5 10 15

Leu Pro Ser Ser Ala Glu Gln Gln His Leu Leu Ser Val Leu Phe Leu
20 25 30

```
Cys Met Tyr Leu Ala Thr Thr Leu Gly Asn Met Leu Ile Ile Ala Thr
        35                  40                  45

Ile Gly Phe Asp Ser His Leu His Ser Pro Met Tyr Phe Phe Leu Ser
    50                  55                  60

Asn Leu Ala Phe Val Asp Ile Cys Phe Thr Ser Thr Thr Val Pro Gln
65                  70                  75                  80

Met Val Val Asn Ile Leu Thr Gly Thr Lys Thr Ile Ser Phe Ala Gly
                85                  90                  95

Cys Leu Thr Gln Leu Phe Phe Phe Val Ser Phe Val Asn Met Asp Ser
            100                 105                 110

Leu Leu Leu Cys Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
        115                 120                 125

Pro Leu His Tyr Thr Ala Arg Met Asn Leu Cys Leu Cys Val Gln Leu
    130                 135                 140

Val Ala Gly Leu Trp Leu Val Thr Tyr Leu His Ala Leu Leu His Thr
145                 150                 155                 160

Val Leu Ile Ala Gln Leu Ser Phe Cys Ala Ser Asn Ile Ile His His
                165                 170                 175

Phe Phe Cys Asp Leu Asn Pro Leu Leu Gln Leu Ser Cys Ser Asp Val
            180                 185                 190

Ser Phe Asn Val Met Ile Ile Phe Ala Val Gly Gly Leu Leu Ala Leu
        195                 200                 205

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

Val Leu Lys Ile Thr Ser Thr Gln Gly Lys Gln Arg Ala Val Ser Thr
```

225 230 235 240

Cys Ser Cys His Leu Ser Val Val Val Leu Phe Tyr Gly Thr Ala Ile
245 250 255

Ala Val Tyr Phe Ser Pro Ser Ser Pro His Met Pro Glu Ser Asp Thr
260 265 270

Leu Ser Thr Ile Met Tyr Ser Met Val Ala Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Thr Leu Arg Asn Arg Asp Met Lys Arg Gly Leu Gln Lys Met
290 295 300

Leu Leu Lys Cys Thr Val Phe Gln Gln Gln
305 310

<210> 30
<211> 945
<212> DNA
<213> homo sapiens

<400> 30
atggagaaca acacagaggt gactgaattc atccttgtgg ggttaactga tgacccagaa 60

ctgcagatcc cactcttcat agtcttcctt ttcatctacc tcatcactct ggttgggaac 120

ctggggatga ttgaattgat tctactggac tcctgtctcc acacccccat gtacttcttc 180

ctcagtaacc tctccctggt ggactttggt tattcctcag ctgtcactcc caaggtgatg 240

gtggggtttc tcacaggaga caaattcata ttatataatg cttgtgccac acaattcttc 300

ttctttgtag cctttatcac tgcagaaagt ttcctcctgg catcaatggc ctatgaccgc 360

tatgcagcat tgtgtaaacc cctgcattac accaccacca tgacaacaaa tgtatgtgct 420

tgcctggcca taggctccta catctgtggt ttcctgaatg catccattca tactgggaac 480

actttcaggc tctccttctg tagatccaat gtagttgaac actttttctg tgatgctcct 540

cctctcttga ctctctcatg ttcagacaac tacatcagtg agatggttat ttttttgtg 600

gtgggattca atgacctctt ttctatcctg gtaatcttga tctcctactt atttatattt 660

atcaccatca tgaagatgcg ctcacctgaa ggacgccaga aggccttttc tacttgtgct 720

tcccacctta ctgcagtttc catcttttat gggacaggaa tctttatgta cttacgacct 780

aactccagcc atttcatggg cacagacaaa atggcatctg tgttctatgc catagtcatt 840

cccatgttga atccactggt ctacagcctg aggaacaaag aggttaagag tgcctttaaa 900

aagactgtag ggaaggcaaa ggcctctata ggattcatat tttaa 945

<210> 31
<211> 314
<212> PRT
<213> homo sapiens

<400> 31

Met Glu Asn Asn Thr Glu Val Thr Glu Phe Ile Leu Val Gly Leu Thr
1 5 10 15

Asp Asp Pro Glu Leu Gln Ile Pro Leu Phe Ile Val Phe Leu Phe Ile
20 25 30

Tyr Leu Ile Thr Leu Val Gly Asn Leu Gly Met Ile Glu Leu Ile Leu
35 40 45

Leu Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Leu Val Asp Phe Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Met
65 70 75 80

Val Gly Phe Leu Thr Gly Asp Lys Phe Ile Leu Tyr Asn Ala Cys Ala
85 90 95

Thr Gln Phe Phe Phe Phe Val Ala Phe Ile Thr Ala Glu Ser Phe Leu
100 105 110

Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ala Ala Leu Cys Lys Pro Leu
115 120 125

His Tyr Thr Thr Thr Met Thr Thr Asn Val Cys Ala Cys Leu Ala Ile

```
    130                 135                 140

Gly Ser Tyr Ile Cys Gly Phe Leu Asn Ala Ser Ile His Thr Gly Asn
145                 150                 155                 160

Thr Phe Arg Leu Ser Phe Cys Arg Ser Asn Val Val Glu His Phe Phe
                165                 170                 175

Cys Asp Ala Pro Pro Leu Leu Thr Leu Ser Cys Ser Asp Asn Tyr Ile
            180                 185                 190

Ser Glu Met Val Ile Phe Phe Val Val Gly Phe Asn Asp Leu Phe Ser
        195                 200                 205

Ile Leu Val Ile Leu Ile Ser Tyr Leu Phe Ile Phe Ile Thr Ile Met
    210                 215                 220

Lys Met Arg Ser Pro Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala
225                 230                 235                 240

Ser His Leu Thr Ala Val Ser Ile Phe Tyr Gly Thr Gly Ile Phe Met
                245                 250                 255

Tyr Leu Arg Pro Asn Ser Ser His Phe Met Gly Thr Asp Lys Met Ala
            260                 265                 270

Ser Val Phe Tyr Ala Ile Val Ile Pro Met Leu Asn Pro Leu Val Tyr
        275                 280                 285

Ser Leu Arg Asn Lys Glu Val Lys Ser Ala Phe Lys Lys Thr Val Gly
    290                 295                 300

Lys Ala Lys Ala Ser Ile Gly Phe Ile Phe
305                 310
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