SEQUENCE LISTING

<110> Ettenberg, Seth Alexander
Cong, Feng
Hartlepp, Felix
Klagge, Ingo Markus

<120> Compositions and Methods of Use for
Therapeutic Low Density Lipoprotein - Related Protein 6
(LRP6) Antibodies

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<150> 61/331985
<151> 2010-05-06

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Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
        35   40   45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
    50   55   60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
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Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
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Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
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        35   40   45
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    50   55   60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65   70   75   80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
                85   90   95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro
            100   105   110
Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys
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Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr
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Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr
145   150   155   160
Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr
                165   170   175
Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys
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<400> 18

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Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130                 135                 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
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Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
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Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
        195                 200                 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
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Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
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Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
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Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
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Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
        355                 360                 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
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Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385                 390                 395                 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                405                 410                 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
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accacaccct ccaaacaaag caacaacaag tacgcggcca gcagctatct gagcctgacg 540
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<213> Homo Sapien

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 1   5   10

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<210> 26
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<212> PRT
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            20   25   30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly

85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

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<212> PRT
<213> Homo Sapien

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20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
50 55 60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
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Thr Leu Val Thr Val Ser Ser
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<213> Homo Sapien

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20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr
35 40 45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

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<213> Homo Sapien

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20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
50 55 60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
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20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala
100 105 110
Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala
115 120 125
Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala
130 135 140
Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val

145 150 155 160
Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser
165 170 175
Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr
180 185 190
Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala
195 200 205
Pro Thr Glu Ala
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<213> Homo Sapien

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20 25 30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
50 55 60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95
Arg Tyr Asp Tyr Ile Lys Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
210 215 220

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<212> DNA
<213> Homo Sapien

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caggcgccag ttcttgtgat ttatggtgat tctaatcgtc cctcaggcat cccggaacgc 180
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<212> DNA
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<210> 43
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His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Arg Ala Gln Ala Gly
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly
                85   90   95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105

<210> 44
<211> 119
<212> PRT
<213> Homo Sapien

<400> 44
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Val Asn
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Tyr Asp Tyr Ile Lys Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly
            100   105   110

Thr Leu Val Thr Val Ser Ser
115

<210> 45
<211> 321
<212> DNA
<213> Homo Sapien

<400> 45
agctatgaac tgacccagcc gctgtctgtg agcgtggcgc tgggccagac cgcgcgtatt 60
acctgcggtg gcgataacat tggcagcaaa tatgtgcatt ggtatcagca gaaaccgggc 120
caggcgccgg tgctggtgat ttatggcgat agcaaccgtc cgagcggcat tccggaacgt 180
tttagcggca gcaacagcgg caacaccgcg accctgacca tttctcgcgc gcaggcgggt 240
gatgaagcgg attattattg cacccgtacc agcaccccga ttagcggcgt gtttggcggc 300
ggtacgaagt taaccgttct t 321

<210> 46
<211> 357
<212> DNA
<213> Homo Sapien

<400> 46
gaggtgcaat tgctggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct gttaatggta tgcattgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcgtt attgatggta tgggtcatac ttattatgct 180
gattctgtta agggtcgttt taccatttca cgtgataatt cgaaaaacac cctgtatctg 240
caaatgaaca gcctgcgtgc ggaagatacg gccgtgtatt attgcgcgcg ttatgattat 300
attaagtatg gtgcttttga tccttggggc caaggcaccc tggtgacggt tagctca 357

<210> 47
<211> 5
<212> PRT
<213> Homo Sapien

<400> 47
Asp Tyr Ala Ile His
1 5

<210> 48
<211> 17
<212> PRT
<213> Homo Sapien

<400> 48
Gly Ile Ser Tyr Ser Gly Ser Ser Thr His Tyr Ala Asp Ser Val Lys
1 5 10 15
Gly

<210> 49
<211> 14
<212> PRT
<213> Homo Sapien

<400> 49
Gly Ser His Gly Asn Ile Met Ala Lys Arg Tyr Phe Asp Phe
1 5 10

<210> 50

<211> 11
<212> PRT
<213> Homo Sapien

<400> 50
Ser Gly Asp Asn Ile Arg Lys Lys Tyr Val Tyr
 1   5   10

<210> 51
<211> 7
<212> PRT
<213> Homo Sapien

<400> 51
Glu Asp Ser Lys Arg Pro Ser
 1   5

<210> 52
<211> 11
<212> PRT
<213> Homo Sapien

<400> 52
Ser Thr Ala Asp Ser Gly Ile Asn Asn Gly Val
 1   5   10

<210> 53
<211> 7
<212> PRT
<213> Homo Sapien

<400> 53
Gly Phe Thr Phe Ser Asp Tyr
 1   5

<210> 54
<211> 6
<212> PRT
<213> Homo Sapien

<400> 54
Ser Tyr Ser Gly Ser Ser
 1   5

<210> 55
<211> 14
<212> PRT
<213> Homo Sapien

<400> 55
Gly Ser His Gly Asn Ile Met Ala Lys Arg Tyr Phe Asp Phe
 1   5   10

<210> 56
<211> 7
<212> PRT
<213> Homo Sapien

<400> 56
Asp Asn Ile Arg Lys Lys Tyr
 1   5

<210> 57
<211> 3
<212> PRT
<213> Homo Sapien

<400> 57
Glu Asp Ser
 1

<210> 58
<211> 8
<212> PRT
<213> Homo Sapien

<400> 58
Ala Asp Ser Gly Ile Asn Asn Gly
 1   5

<210> 59
<211> 108
<212> PRT
<213> Homo Sapien

<400> 59
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1   5   10   15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Asn Ile Arg Lys Lys Tyr Val
            20   25   30
Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Glu Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Ser Thr Ala Asp Ser Gly Ile Asn Asn
                85   90   95
Gly Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105

<210> 60
<211> 123
<212> PRT
<213> Homo Sapien

<400> 60
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20   25   30
Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Tyr Ser Gly Ser Ser Thr His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr

65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser His Gly Asn Ile Met Ala Lys Arg Tyr Phe Asp Phe
100 105 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 61
<211> 108
<212> PRT
<213> Homo Sapien

<400> 61
Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15
Thr Ala Ser Ile Thr Cys Ser Gly Asp Asn Ile Arg Lys Lys Tyr Val
20 25 30
Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr
35 40 45
Glu Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Ser Thr Ala Asp Ser Gly Ile Asn Asn
85 90 95
Gly Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 62
<211> 123
<212> PRT
<213> Homo Sapien

<400> 62
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30
Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Ser Tyr Ser Gly Ser Ser Thr His Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Gly Ser His Gly Asn Ile Met Ala Lys Arg Tyr Phe Asp Phe
100 105 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 63
<211> 324
<212> DNA
<213> Homo Sapien

<400> 63
gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgataatat tcgtaagaag tatgtttatt ggtaccagca gaaacccggg 120

caggcgccag ttcttgtgat ttatgaggat tctaagcgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ctctactgct gattctggta ttaataatgg tgtgtttggc 300
ggcggcacga agttaaccgt tctt 324

<210> 64
<211> 369
<212> DNA
<213> Homo Sapien

<400> 64
caggtgcaat tggtggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct gattatgcta ttcattgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcggt atctcttatt ctggtagctc tacccattat 180
gcggatagcg tgaaaggccg ttttaccatt tcacgtgata attcgaaaaa caccctgtat 240
ctgcaaatga acagcctgcg tgcggaagat acggccgtgt attattgcgc gcgtggttct 300
catggtaata ttatggctaa gcgttatttt gatttttggg gccaaggcac cctggtgacg 360
gttagctca 369

<210> 65
<211> 214
<212> PRT
<213> Homo Sapien

<400> 65
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1   5   10   15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Asn Ile Arg Lys Lys Tyr Val
            20   25   30
Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Glu Asp Ser Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Ser Thr Ala Asp Ser Gly Ile Asn Asn
                85   90   95
Gly Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys
            100   105   110
Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
        115   120   125
Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
    130   135   140
Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly
145   150   155   160
Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
                165   170   175
Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
            180   185   190
Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
        195   200   205
Ala Pro Thr Glu Cys Ser
    210

<210> 66
<211> 453
<212> PRT
<213> Homo Sapien

<400> 66
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Ala Ile His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Tyr Ser Gly Ser Ser Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Gly Ser His Gly Asn Ile Met Ala Lys Arg Tyr Phe Asp Phe
            100                 105                 110
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
        115                 120                 125
Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
    130                 135                 140
Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
145                 150                 155                 160
Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                165                 170                 175
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
            180                 185                 190
Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
        195                 200                 205
Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys
    210                 215                 220
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala
225                 230                 235                 240
Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
                245                 250                 255
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
            260                 265                 270
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
        275                 280                 285
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
    290                 295                 300
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305                 310                 315                 320
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
                325                 330                 335
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
            340                 345                 350
Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
        355                 360                 365
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
    370                 375                 380
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385                 390                 395                 400
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
                405                 410                 415
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
            420                 425                 430
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
        435                 440                 445
Leu Ser Pro Gly Lys
    450
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<210> 67
<211> 642
<212> DNA
<213> Homo Sapien

<400> 67
gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgataatat tcgtaagaag tatgtttatt ggtaccagca gaaacccggg 120
caggcgccag ttcttgtgat ttatgaggat tctaagcgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ctctactgct gattctggta ttaataatgg tgtgtttggc 300
ggcggcacga agttaaccgt cctaggtcag cccaaggctg ccccctcggt cactctgttc 360
ccgccctcct ctgaggagct tcaagccaac aaggccacac tggtgtgtct cataagtgac 420
ttctacccgg gagccgtgac agtggcctgg aaggcagata gcagccccgt caaggcggga 480
gtggagacca ccacaccctc caaacaaagc aacaacaagt acgcggccag cagctatctg 540
agcctgacgc ctgagcagtg gaagtcccac agaagctaca gctgccaggt cacgcatgaa 600
gggagcaccg tggagaagac agtggccccc acagaatgtt ca 642

<210> 68
<211> 1359
<212> DNA
<213> Homo Sapien

<400> 68
caggtgcaat tggtggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct gattatgcta ttcattgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcggt atctcttatt ctggtagctc tacccattat 180
gcggatagcg tgaaaggccg ttttaccatt tcacgtgata attcgaaaaa caccctgtat 240
ctgcaaatga acagcctgcg tgcggaagat acggccgtgt attattgcgc gcgtggttct 300
catggtaata ttatggccaa gcgttatttt gatttttggg gccaaggcac cctggtgacg 360
gttagctcag cctccaccaa gggtccatcg gtcttccccc tggcaccctc ctccaagagc 420
acctctgggg gcacagcggc cctgggctgc ctggtcaagg actacttccc cgaaccggtg 480
acggtgtcgt ggaactcagg cgccctgacc agcggcgtgc acaccttccc ggctgtccta 540
cagtcctcag gactctactc cctcagcagc gtggtgaccg tgccctccag cagcttgggc 600
acccagacct acatctgcaa cgtgaatcac aagcccagca acaccaaggt ggacaagaga 660
gttgagccca aatcttgtga caaaactcac acatgcccac cgtgcccagc acctgaagca 720
gcgggggggac cgtcagtctt cctcttcccc ccaaaaccca aggacaccct catgatctcc 780
cggaccccctg aggtcacatg cgtggtggtg gacgtgagcc acgaagaccc tgaggtcaag 840
ttcaactggt acgtggacgg cgtggaggtg cataatgcca agacaaagcc gcgggaggag 900
cagtacaaca gcacgtaccg ggtggtcagc gtcctcaccg tcctgcacca ggactggctg 960
aatggcaagg agtacaagtg caaggtctcc aacaaagccc tcccagcccc catcgagaaa 1020
accatctcca aagccaaagg gcagccccga gaaccacagg tgtacaccct gccccatcc 1080
cgggaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtcaaagg cttctatccc 1140
agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccacg 1200
cctcccgtgc tggactccga cggctccttc ttcctctaca gcaagctcac cgtggacaag 1260
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcatgaggc tctgcacaac 1320
cactacacgc agaagagcct ctccctgtct ccgggtaaa 1359

<210> 69
<211> 7
<212> PRT
<213> Homo Sapien

<400> 69
Asn Arg Gly Gly Gly Val Gly
 1   5

<210> 70
<211> 16
<212> PRT
<213> Homo Sapien

<400> 70
Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr
 1   5   10   15

<210> 71
<211> 9
<212> PRT
<213> Homo Sapien

<400> 71
Met His Leu Pro Leu Val Phe Asp Ser
 1   5

<210> 72
<211> 12
<212> PRT
<213> Homo Sapien

<400> 72
Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala
 1   5   10

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

<400> 73
Gly Ala Ser Asn Arg Ala Thr
 1   5

<210> 74
<211> 9
<212> PRT
<213> Homo Sapien

<400> 74
Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr
 1   5

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

<400> 75
Gly Phe Ser Leu Ser Asn Arg Gly Gly
 1   5

<210> 76
<211> 5
<212> PRT
<213> Homo Sapien

<400> 76
Asp Trp Asp Asp Asp
 1   5

<210> 77
<211> 9
<212> PRT

<213> Homo Sapien

<400> 77
Met His Leu Pro Leu Val Phe Asp Ser
 1   5

<210> 78
<211> 8
<212> PRT
<213> Homo Sapien

<400> 78
Ser Gln Phe Ile Gly Ser Arg Tyr
 1   5

<210> 79
<211> 3
<212> PRT
<213> Homo Sapien

<400> 79
Gly Ala Ser
 1

<210> 80
<211> 6
<212> PRT
<213> Homo Sapien

<400> 80
Tyr Tyr Asp Tyr Pro Gln
 1   5

<210> 81
<211> 108
<212> PRT
<213> Homo Sapien

<400> 81
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
                85   90   95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 82
<211> 119
<212> PRT
<213> Homo Sapien

<400> 82
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1   5   10   15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
            20   25   30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35   40   45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
    50   55   60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65   70   75   80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85   90   95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser
        115

<210> 83
<211> 324
<212> DNA
<213> Homo Sapien

<400> 83
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgactta ttattgccag cagtattatg attatcctca gacctttggc 300
cagggtacga aagttgaaat taaa   324

<210> 84
<211> 357
<212> DNA
<213> Homo Sapien

<400> 84
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctca   357

<210> 85
<211> 215
<212> PRT
<213> Homo Sapien

<400> 85
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro

85 90 95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110
Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125
Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140
Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160
Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175
Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190
Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205
Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 86
<211> 449
<212> PRT
<213> Homo Sapien

<400> 86
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
20 25 30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
50 55 60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys
210 215 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
275 280 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305 310 315 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
325 330 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
340 345 350
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
355 360 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
370 375 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385 390 395 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
405 410 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
420 425 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
435 440 445
Lys

<210> 87
<211> 645
<212> DNA
<213> Homo Sapien

<400> 87
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgactta ttattgccag cagtattatg attatcctca gacctttggc 300
cagggtacga aagttgaaat taaacgtacg gtggctgcac catctgtctt catcttcccg 360
ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc 420
tatcccagag aggccaaagt acagtggaag gtggataacg ccctccaatc gggtaactcc 480
caggagagtg tcacagagca ggacagcaag gacagcacct acagcctcag cagcaccctg 540
acgctgagca aagcagacta cgagaaacac aaagtctacg cctgcgaagt cacccatcag 600
ggcctgagct cgcccgtcac aaagagcttc aacaggggag agtgt 645

<210> 88
<211> 1347
<212> DNA
<213> Homo Sapien

<400> 88
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctcagcc 360
tccaccaagg gtccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc 420
acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 480
aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 540
ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 600
atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagagagt tgagcccaaa 660
tcttgtgaca aaactcacac atgcccaccg tgcccagcac ctgaagcagc gggggggaccg 720
tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 780
gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 840
gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 900
acgtaccggg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 960
tacaagtgca aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa 1020

gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggaggagatg 1080
accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 1140
gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1200
gactccgacg gctccttctt cctctacagc aagctcaccg tggacaagag caggtggcag 1260
caggggaacg tcttctcatg ctccgtgatg catgaggctc tgcacaacca ctacacgcag 1320
aagagcctct ccctgtctcc gggtaaa 1347

<210> 89
<211> 119
<212> PRT
<213> Homo Sapien

<400> 89
Gln Val Thr Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
20 25 30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
50 55 60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser
115

<210> 90
<211> 108
<212> PRT
<213> Homo Sapien

<400> 90
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
85 90 95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 91
<211> 357
<212> DNA
<213> Homo Sapien

<400> 91
caggtcacac tgaaagagtc cggccctgcc ctggtcaaac ccacccagac cctgaccctg 60
acatgcacct tcagcggctt cagcctgagc aacagaggcg gcggagtggg ctggatcaga 120
cagcctcccg gcaaggccct ggaatggctg gcctggatcg actgggacga cgacaagagc 180
tacagcacca gcctgaaaac ccggctgacc atcagcaagg acaccagcaa gaaccaggtg 240

gtgctgacca tgaccaacat ggaccccgtg gacaccgcca cctactactg cgcccggatg 300
catctgcccc tggtgttcga tagctggggc cagggcaccc tggtcaccgt cagctca 357

<210> 92
<211> 324
<212> DNA
<213> Homo Sapien

<400> 92
gaaatcgtgc tgacccagag ccccgccacc ctgtctctga gccctggcga gagagccacc 60
ctgagctgcc gggccagcca gttcatcggc agcagatacc tggcttggta tcagcagaag 120
cccggccagg cccccagact gctgatctac ggcgccagca accgggccac cggcatccct 180
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 240
cccgaggact tcgccgtgta ctactgccag cagtactacg actacccccca gaccttcggc 300
cagggcacca aggtggaaat caag 324

<210> 93
<211> 7
<212> PRT
<213> Homo Sapien

<400> 93
Asn Arg Gly Gly Gly Val Gly
1 5

<210> 94
<211> 16
<212> PRT
<213> Homo Sapien

<400> 94
Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr
1 5 10 15

<210> 95
<211> 9
<212> PRT
<213> Homo Sapien

<400> 95
Met His Leu Pro Leu Val Phe Asp Ser
1 5

<210> 96
<211> 12
<212> PRT
<213> Homo Sapien

<400> 96
Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala
1 5 10

<210> 97
<211> 7
<212> PRT
<213> Homo Sapien

<400> 97
Gly Ala Ser Asn Arg Ala Thr

1 5

<210> 98
<211> 9
<212> PRT
<213> Homo Sapien

<400> 98
Gln Gln Tyr Trp Ser Ile Pro Ile Thr
1 5

<210> 99
<211> 9
<212> PRT
<213> Homo Sapien

<400> 99
Gly Phe Ser Leu Ser Asn Arg Gly Gly
1 5

<210> 100
<211> 5
<212> PRT
<213> Homo Sapien

<400> 100
Asp Trp Asp Asp Asp
1 5

<210> 101
<211> 9
<212> PRT
<213> Homo Sapien

<400> 101
Met His Leu Pro Leu Val Phe Asp Ser
1 5

<210> 102
<211> 8
<212> PRT
<213> Homo Sapien

<400> 102
Ser Gln Phe Ile Gly Ser Arg Tyr
1 5

<210> 103
<211> 3
<212> PRT
<213> Homo Sapien

<400> 103
Gly Ala Ser
1

<210> 104
<211> 6
<212> PRT
<213> Homo Sapien

<400> 104
Tyr Trp Ser Ile Pro Ile
1 5

<210> 105
<211> 108
<212> PRT
<213> Homo Sapien

<400> 105
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro
85 90 95
Ile Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 106
<211> 119
<212> PRT
<213> Homo Sapien

<400> 106
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
20 25 30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
50 55 60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser
115

<210> 107
<211> 108
<212> PRT
<213> Homo Sapien

<400> 107
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly

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 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro
                85                  90                  95
Ile Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100                 105
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<210> 108
<211> 119
<212> PRT
<213> Homo Sapien

<400> 108

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Gln Val Thr Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1               5                  10                  15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
            20                  25                  30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
    50                  55                  60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser
        115
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<210> 109
<211> 324
<212> DNA
<213> Homo Sapien

<400> 109

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gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcggtgta ttattgccag cagtattggt ctattcctat tacctttggc 300
cagggtacga aagttgaaat taaa                                        324
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<210> 110
<211> 357
<212> DNA
<213> Homo Sapien

<400> 110

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caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
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catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctca 357

<210> 111
<211> 215
<212> PRT
<213> Homo Sapien

<400> 111
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Trp Ser Ile Pro
85 90 95
Ile Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110
Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125
Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140
Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160
Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175
Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190
Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205
Ser Phe Asn Arg Gly Glu Ala
210 215

<210> 112
<211> 221
<212> PRT
<213> Homo Sapien

<400> 112
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
20 25 30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
50 55 60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp

145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
210 215 220

<210> 113
<211> 645
<212> DNA
<213> Homo Sapien

<400> 113
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcggtgta ttattgccag cagtattggt ctattcctat tacctttggc 300
cagggtacga aagttgaaat taaacgtacg gtggctgctc cgagcgtgtt tattttccg 360
ccgagcgatg aacaactgaa aagcggcacg gcgagcgtgg tgtgcctgct gaacaacttt 420
tatccgcgtg aagcgaaagt tcagtggaaa gtagacaacg cgctgcaaag cggcaacagc 480
caggaaagcg tgaccgaaca ggatagcaaa gatagcacct attctctgag cagcaccctg 540
accctgagca aagcggatta tgaaaaacat aaagtgtatg cgtgcgaagt gacccatcaa 600
ggtctgagca gcccggtgac taaatctttt aatcgtggcg aggcc 645

<210> 114
<211> 663
<212> DNA
<213> Homo Sapien

<400> 114
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctcagcg 360
tcgaccaaag gtccaagcgt gtttccgctg gctccgagca gcaaaagcac cagcggcggc 420
acggctgccc tgggctgcct ggttaaagat tatttcccgg aaccagtcac cgtgagctgg 480
aacagcgggg cgctgaccag cggcgtgcat acctttccgg cggtgctgca aagcagcggc 540
ctgtatagcc tgagcagcgt tgtgaccgtg ccgagcagca gcttaggcac tcagacctat 600
atttgcaacg tgaaccataa accgagcaac accaaagtgg ataaaaaagt ggaaccgaaa 660
agc 663

<210> 115
<211> 5
<212> PRT
<213> Homo Sapien

<400> 115
Ser Tyr Gly Met Ser
1 5

<210> 116
<211> 17
<212> PRT
<213> Homo Sapien

<400> 116
Asn Ile Ser Asn Asp Gly His Tyr Thr Tyr Tyr Ala Asp Ser Val Lys
 1   5   10   15
Gly

<210> 117
<211> 11
<212> PRT
<213> Homo Sapien

<400> 117
Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr
 1   5   10

<210> 118
<211> 11
<212> PRT
<213> Homo Sapien

<400> 118
Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val His
 1   5   10

<210> 119
<211> 7
<212> PRT
<213> Homo Sapien

<400> 119
Asn Asp Ser Asn Arg Pro Ser
 1   5

<210> 120
<211> 10
<212> PRT
<213> Homo Sapien

<400> 120
Gln Ala Trp Gly Asp Asn Gly Thr Arg Val
 1   5   10

<210> 121
<211> 7
<212> PRT
<213> Homo Sapien

<400> 121
Gly Phe Thr Phe Ser Ser Tyr
 1   5

<210> 122
<211> 6
<212> PRT
<213> Homo Sapien

<400> 122

Ser Asn Asp Gly His Tyr
1 5

<210> 123
<211> 11
<212> PRT
<213> Homo Sapien

<400> 123
Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr
1 5 10

<210> 124
<211> 7
<212> PRT
<213> Homo Sapien

<400> 124
Asp Asn Ile Gly Ser Lys Tyr
1 5

<210> 125
<211> 3
<212> PRT
<213> Homo Sapien

<400> 125
Asn Asp Ser
1

<210> 126
<211> 7
<212> PRT
<213> Homo Sapien

<400> 126
Trp Gly Asp Asn Gly Thr Arg
1 5

<210> 127
<211> 107
<212> PRT
<213> Homo Sapien

<400> 127
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Ser Ile Thr Ile Ser Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val
20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45
Asn Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Gly Asp Asn Gly Thr Arg
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu

100 105

<210> 128
<211> 120
<212> PRT
<213> Homo Sapien

<400> 128
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Asn Ile Ser Asn Asp Gly His Tyr Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 129
<211> 107
<212> PRT
<213> Homo Sapien

<400> 129
Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15
Thr Ala Ser Ile Thr Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val
20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr
35 40 45
Asn Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Gly Asp Asn Gly Thr Arg
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 130
<211> 120
<212> PRT
<213> Homo Sapien

<400> 130
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Asn Ile Ser Asn Asp Gly His Tyr Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 131
<211> 321
<212> DNA
<213> Homo Sapien

<400> 131
gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagag cattaccatc 60
tcgtgtagcg gcgataatat tggttctaag tatgttcatt ggtaccagca gaaacccggg 120
caggcgccag ttcttgtgat ttataatgat tctaatcgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccaggcttgg ggtgataatg gtactcgtgt gtttggcggc 300
ggcacgaagt taaccgttct t 321

<210> 132
<211> 360
<212> DNA
<213> Homo Sapien

<400> 132
caggtgcaat tggtggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct tcttatggta tgtcttgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcaat atttctaatg atggtcatta tacttattat 180
gctgattctg ttaagggtcg ttttaccatt tcacgtgata attcgaaaaa caccctgtat 240
ctgcaaatga acagcctgcg tgcggaagat acggccgtgt attattgcgc gcgttttcag 300
gcttcttatc ttgatattat ggattattgg ggccaaggca ccctggtgac ggttagctca 360

<210> 133
<211> 212
<212> PRT
<213> Homo Sapien

<400> 133
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Ser Ile Thr Ile Ser Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val
20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45
Asn Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Gly Asp Asn Gly Thr Arg
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala
100 105 110
Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala
115 120 125
Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala
130 135 140
Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val
145 150 155 160

Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser
165 170 175
Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr
180 185 190
Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala
195 200 205
Pro Thr Glu Ala
210

<210> 134
<211> 222
<212> PRT
<213> Homo Sapien

<400> 134
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Asn Ile Ser Asn Asp Gly His Tyr Thr Tyr Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr Trp Gly Gln
100 105 110
Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125
Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
130 135 140
Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160
Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175
Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190
Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
195 200 205
Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser
210 215 220

<210> 135
<211> 636
<212> DNA
<213> Homo Sapien

<400> 135
gatatcgaac tgacccagcc gccttcagtg agcgttgcac caggtcagag cattaccatc 60
tcgtgtagcg gcgataatat tggttctaag tatgttcatt ggtaccagca gaaacccggg 120
caggcgccag ttcttgtgat ttataatgat tctaatcgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccaggcttgg ggtgataatg gtactcgtgt gtttggcggc 300
ggcacgaagt taaccgttct tggccagccg aaagccgcac cgagtgtgac gctgtttccg 360
ccgagcagcg aagaattgca ggcgaacaaa gcgaccctgg tgtgcctgat tagcgacttt 420
tatccgggag ccgtgacagt ggcctggaag gcagatagca gccccgtcaa ggcgggagtg 480
gagaccacca caccctccaa acaaagcaac aacaagtacg cggccagcag ctatctgagc 540
ctgacgcctg agcagtggaa gtcccacaga agctacagct gccaggtcac gcatgagggg 600
agcaccgtgg aaaaaaccgt tgcgccgact gaggcc 636

<210> 136
<211> 666
<212> DNA
<213> Homo Sapien

<400> 136
caggtgcaat tggtggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct tcttatggta tgtcttgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcaat atttctaatg atggtcatta tacttattat 180
gctgattctg ttaagggtcg ttttaccatt tcacgtgata attcgaaaaa caccctgtat 240
ctgcaaatga acagcctgcg tgcggaagat acggccgtgt attattgcgc gcgttttcag 300
gcttcttatc ttgatattat ggattattgg ggccaaggca ccctggtgac ggttagctca 360
gcgtcgacca aaggtccaag cgtgtttccg ctggctccga gcagcaaaag caccagcggc 420
ggcacggctg ccctgggctg cctggttaaa gattatttcc cggaaccagt caccgtgagc 480
tggaacagcg gggcgctgac cagcggcgtg cataccttttc cggcggtgct gcaaagcagc 540
ggcctgtata gcctgagcag cgttgtgacc gtgccgagca gcagcttagg cactcagacc 600
tatatttgca acgtgaacca taaaccgagc aacaccaaag tggataaaaa agtggaaccg 660
aaaagc 666

<210> 137
<211> 107
<212> PRT
<213> Homo Sapien

<400> 137
Ser Tyr Glu Leu Thr Gln Pro Leu Ser Val Ser Val Ala Leu Gly Gln
 1   5   10   15
Thr Ala Arg Ile Thr Cys Gly Gly Asp Asn Ile Gly Ser Lys Tyr Val
            20   25   30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Asn Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Arg Ala Gln Ala Gly
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Gly Asp Asn Gly Thr Arg
                85   90   95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105

<210> 138
<211> 120
<212> PRT
<213> Homo Sapien

<400> 138
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
            20   25   30
Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Asn Ile Ser Asn Asp Gly His Tyr Thr Tyr Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Phe Gln Ala Ser Tyr Leu Asp Ile Met Asp Tyr Trp Gly Gln
            100   105   110
Gly Thr Leu Val Thr Val Ser Ser

115 120

<210> 139
<211> 321
<212> DNA
<213> Homo Sapien

<400> 139
agctatgaac tgacccagcc gctgagtgtt agcgttgcgc tgggtcagac cgcgcgtatt 60
acctgcggcg gtgataacat tggcagcaaa tatgtgcatt ggtatcagca gaaaccgggc 120
caggcgccgg tgctggtgat ttataacgat agcaaccgtc cgagcggcat tccggaacgt 180
tttagcggca gcaacagcgg caataccgcg accctgacca ttagccgtgc gcaggcgggt 240
gatgaagcgg attattattg ccaggcgtgg ggcgataatg gtacgcgtgt gtttggcggt 300
ggtacgaagt taaccgttct t 321

<210> 140
<211> 360
<212> DNA
<213> Homo Sapien

<400> 140
gaggtgcaat tgctggaaag cggcggcggc ctggtgcaac cgggcggcag cctgcgtctg 60
agctgcgcgg cctccggatt tacctttttct tcttatggta tgtcttgggt gcgccaagcc 120
cctgggaagg gtctcgagtg ggtgagcaat atttctaatg atggtcatta tacttattat 180
gctgattctg ttaagggtcg ttttaccatt tcacgtgata attcgaaaaa caccctgtat 240
ctgcaaatga acagcctgcg tgcggaagat acggccgtgt attattgcgc gcgttttcag 300
gcttcttatc ttgatattat ggattattgg ggccaaggca ccctggtgac ggttagctca 360

<210> 141
<211> 726
<212> DNA
<213> Homo Sapien

<400> 141
gatatcgttc tgacccagag tccggcaacc ctgagcctga gtccgggtga acgtgccacc 60
ctgagctgtc gtgcaagcca gtttattggt agccgttatc tggcatggta tcagcagaaa 120
ccgggtcagg caccgcgtct gctgatttat ggtgcaagca atcgtgcaac cggtgttccg 180
gcacgtttta gcggtagcgg tagtggcacc gattttaccc tgaccattag cagcctggaa 240
ccggaagatt ttgcaaccta ttattgccag cagtattatg attatccgca gacctttggt 300
cagggcacca aggtggaaat taaaggtggt ggtggtagcg gtggtggtgg ctcaggtggt 360
ggcggtagtc aggttcaatt gaaagaaagc ggtccggcac tggttaaacc gacccagacc 420
ctgaccctga catgtacctt tagcggtttt agcctgagca atcgtggtgg tggtgttggt 480
tggattcgtc agcctccggg taaagcactg gaatggctgg catggattga ttgggatgat 540
gataaaagct atagcaccag cctgaaaacc cgtctgacca ttagtaaaga taccagcaaa 600
aatcaggtgg ttctgaccat gaccaatatg gatccggttg ataccgccac ctattattgt 660
gcacgtatgc atctgccgct ggtttttgat agctggggtc agggtacact agttaccgtt 720
agcagc 726

<210> 142
<211> 242
<212> PRT
<213> Homo Sapien

<400> 142
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser

50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
85 90 95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly
100 105 110
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Lys
115 120 125
Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu Thr
130 135 140
Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val Gly
145 150 155 160
Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp Ile
165 170 175
Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg Leu
180 185 190
Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met Thr
195 200 205
Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met His
210 215 220
Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val
225 230 235 240
Ser Ser

<210> 143
<211> 741
<212> DNA
<213> Homo Sapien

<400> 143
gatatcgtgc tgacacagag ccctgccacc ctgtctctga gccctggcga gagagccacc 60
ctgagctgcc gggccagcca gttcatcggc tcccgctacc tggcctggta tcagcagaag 120
cccggacagg ctcccagact gctgatctac ggcgccagca acagagctac cggcgtgccc 180
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 240
cccgaggact tcgccaccta ctactgccag cagtactacg actaccccca gaccttcggc 300
cagggcacca aggtggagat caagggcgga ggcggatccg ggggtggcgg aagtggaggc 360
ggaggaagcg gagggggcgg aagccaggtg caattgaaag agtccggccc tgccctggtg 420
aagcctaccc agaccctgac cctgacatgc accttcagcg gcttcagcct gagcaacaga 480
ggcggcggag tgggctggat cagacagcct cccggcaagg ccctggaatg gctggcctgg 540
atcgactggg acgacgacaa gagctacagc accagcctga aaacccggct gaccatctcc 600
aaggacacca gcaagaacca ggtggtgctc accatgacca acatggaccc cgtggacacc 660
gccacctatt attgcgcccg gatgcatctg cccctggtgt tcgatagctg gggccaggga 720
accctggtga cagtgtccag c 741

<210> 144
<211> 247
<212> PRT
<213> Homo Sapien

<400> 144
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
20 25 30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80

```
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
                85                  90                  95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly
            100                 105                 110
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
    130                 135                 140
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
145                 150                 155                 160
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
                165                 170                 175
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
            180                 185                 190
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
        195                 200                 205
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
    210                 215                 220
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
225                 230                 235                 240
Thr Leu Val Thr Val Ser Ser
                245
```

<210> 145
<211> 726
<212> DNA
<213> Homo Sapien

<400> 145

```
caggttcaat tgaaagaaag cggtccggca ctggttaaac cgacccagac cctgaccctg 60
acatgtacct ttagcggttt tagcctgagc aatcgtggtg gtggtgttgg ttggattcgt 120
cagcctccgg gtaaagcact ggaatggctg gcatggattg attgggatga tgataaaagc 180
tatagcacca gcctgaaaac ccgtctgacc attagcaaag ataccagcaa aaatcaggtt 240
gttctgacca tgaccaatat ggatccggtt gataccgcaa cctattattg tgcacgtatg 300
catctgccgc tggtttttga tagctggggt cagggtacac tagttaccgt tagcagcggt 360
ggtggtggta gcggtggtgg cggttcaggt ggtggtggca gtgatatcgt tctgacccag 420
agtccggcaa ccctgagcct gagtccgggt gaacgtgcca ccctgagctg tcgtgcaagc 480
cagtttattg gtagccgtta tctggcatgg tatcagcaga aaccgggtca ggcaccgcgt 540
ctgctgattt atggtgcaag caatcgtgca accggtgttc cggcacgttt tagcggtagc 600
ggtagtggca ccgattttac cctgaccatt agtagcctgg aaccggaaga ttttgccacc 660
tattattgcc agcagtatta tgattatccg cagacctttg gtcagggcac caaggtggaa 720
attaaa                                                          726
```

<210> 146
<211> 242
<212> PRT
<213> Homo Sapien

<400> 146

```
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1               5                  10                  15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
            20                  25                  30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
    50                  55                  60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
```

```
            100                 105                 110
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125
Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Thr
    130                 135                 140
Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser
145                 150                 155                 160
Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly
                165                 170                 175
Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly
            180                 185                 190
Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
        195                 200                 205
Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln
    210                 215                 220
Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly Gln Gly Thr Lys Val Glu
225                 230                 235                 240
Ile Lys
```

<210> 147
<211> 741
<212> DNA
<213> Homo Sapien

<400> 147

```
caggttcaat tgaaagaaag cggtccggca ctggttaaac cgacccagac cctgaccctg 60
acatgtacct ttagcggttt tagcctgagc aatcgtggtg gtggtgttgg ttggattcgt 120
cagcctccgg gtaaagcact ggaatggctg gcatggattg attgggatga tgataaaagc 180
tatagcacca gcctgaaaac ccgtctgacc attagcaaag ataccagcaa aaatcaggtt 240
gttctgacca tgaccaatat ggatccggtt gataccgcaa cctattattg tgcacgtatg 300
catctgccgc tggtttttga tagctggggt cagggtacac tagttaccgt tagcagcggt 360
ggtggtggta gcggtggtgg cggttcaggt ggtggtggca gtggcggtgg tggtagtgat 420
atcgttctga cccagagtcc ggcaaccctg agcctgagtc cgggtgaacg tgccaccctg 480
agctgtcgtg caagccagtt tattggtagc cgttatctgg catggtatca gcagaaaccg 540
ggtcaggcac cgcgtctgct gatttatggt gcaagcaatc gtgcaaccgg tgttccggca 600
cgttttagcg gtagcggtag tggcaccgat tttaccctga ccattagtag cctggaaccg 660
gaagattttg ccacctatta ttgccagcag tattatgatt atccgcagac ctttggtcag 720
ggcaccaagg tggaaattaa a                                           741
```

<210> 148
<211> 247
<212> PRT
<213> Homo Sapien

<400> 148

```
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1               5                  10                  15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
            20                  25                  30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
    50                  55                  60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115                 120                 125
```

```
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Leu Thr
    130                 135                 140
Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu
145                 150                 155                 160
Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp Tyr
                165                 170                 175
Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser
            180                 185                 190
Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
        195                 200                 205
Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
    210                 215                 220
Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly Gln
225                 230                 235                 240
Gly Thr Lys Val Glu Ile Lys
                245
```

<210> 149
<211> 732
<212> DNA
<213> Homo Sapien

<400> 149

```
gatatcgaac tgacccagcc tccgagcgtt agcgttgcac cgggtcagac cgcacgtatt 60
agctgtagcg gtgatagcct gcgtaataaa gtttattggt atcagcagaa accgggtcag 120
gcaccggttc tggttattta taaaaataat cgtccgagcg gtattccgga acgttttagc 180
ggtagcaata gcggtaatac cgcaaccctg accattagcg gcacccaggc agaagatgaa 240
gcagattatt attgccagag ctatgatggt cagaaaagcc tggtttttgg tggtggcacc 300
aagcttaccg ttctgggtgg tggtggtagc ggtggtggtg gctcaggtgg tggcggttct 360
caggttcaat tggttgaaag tggtggtggt ctggttcagc ctggtggtag cctgcgtctg 420
agctgtgcag caagcggttt acctttagc gattatgtga ttaattgggt tcgccaggca 480
ccgggtaaag gtctggaatg ggttagcggt attagctggt caggtgttaa tacccattat 540
gcagatagcg tgaaaggtcg ttttaccatt agccgtgata atagcaaaaa taccctgtat 600
ctgcagatga atagcctgcg tgcagaagat accgcagttt attattgtgc acgtctgggt 660
gcaaccgcaa ataatattcg ctataaattt atggatgtgt ggggtcaggg tacactagtt 720
accgttagca gc                                                    732
```

<210> 150
<211> 244
<212> PRT
<213> Homo Sapien

<400> 150

```
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1                5                  10                  15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
            20                  25                  30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
        35                  40                  45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
    50                  55                  60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65                  70                  75                  80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
                85                  90                  95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Ser Gly Gly
            100                 105                 110
Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly
        115                 120                 125
Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
    130                 135                 140
Ser Gly Phe Thr Phe Ser Asp Tyr Val Ile Asn Trp Val Arg Gln Ala
```

145 150 155 160
Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Ser Gly Val
165 170 175
Asn Thr His Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg
180 185 190
Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala
195 200 205
Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Leu Gly Ala Thr Ala Asn
210 215 220
Asn Ile Arg Tyr Lys Phe Met Asp Val Trp Gly Gln Gly Thr Leu Val
225 230 235 240
Thr Val Ser Ser

<210> 151
<211> 747
<212> DNA
<213> Homo Sapien

<400> 151
gatatcgaac tgacccagcc tccgagcgtt agcgttgcac cgggtcagac cgcacgtatt 60
agctgtagcg gtgatagcct gcgtaataaa gtttattggt atcagcagaa accgggtcag 120
gcaccggttc tggttattta taaaaataat cgtccgagcg gtattccgga acgttttagc 180
ggtagcaata gcggtaatac cgcaaccctg accattagcg gcacccaggc agaagatgaa 240
gcagattatt attgccagag ctatgatggt cagaaaagcc tggtttttgg tggtggcacc 300
aagcttaccg ttctgggtgg tggtggtagc ggtggtggtg gctcaggtgg tggcggttct 360
ggtggcggtg gttcacaggt tcaattggtt gaaagtggtg gtggtctggt tcagcctggt 420
ggtagcctgc gtctgagctg tgcagcaagc ggttttacct ttagcgatta tgtgattaat 480
tgggttcgcc aggcaccggg taaaggtctg gaatgggtta gcggtattag ctggtcaggt 540
gttaataccc attatgcaga tagcgtgaaa ggtcgtttta ccattagccg tgataatagc 600
aaaaataccc tgtatctgca gatgaatagc ctgcgtgcag aagataccgc agtttattat 660
tgtgcacgtc tgggtgcaac cgcaaataat attcgctata aatttatgga tgtgtggggt 720
cagggtacac tagttaccgt tagcagc 747

<210> 152
<211> 249
<212> PRT
<213> Homo Sapien

<400> 152
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Ser Gly Gly
100 105 110
Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln
115 120 125
Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg
130 135 140
Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr Val Ile Asn
145 150 155 160
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile
165 170 175

```
Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val Lys Gly Arg
            180                 185                 190
Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met
        195                 200                 205
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Leu
    210                 215                 220
Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp Val Trp Gly
225                 230                 235                 240
Gln Gly Thr Leu Val Thr Val Ser Ser
                245
```

<210> 153
<211> 732
<212> DNA
<213> Homo Sapien

<400> 153

```
caggttcaat tggttgaaag cggtggtggt ctggttcagc ctggtggtag cctgcgtctg 60
agctgtgcag caagcggttt acctttagc gattatgtga ttaattgggt tcgtcaggca 120
ccgggtaaag gtctggaatg ggttagcggt attagctggt caggtgttaa tacccattat 180
gcagatagcg tgaaaggtcg ttttaccatt agccgtgata atagcaaaaa taccctgtat 240
ctgcagatga atagcctgcg tgcagaagat accgcagttt attattgtgc acgtctgggt 300
gcaaccgcaa ataatattcg ctataaattt atggatgtgt ggggtcaggg tacactagtt 360
accgttagca gtggtggtgg tggtagcggt ggtggcggat ctggtggcgg tggcagtgat 420
atcgaactga cccagcctcc gagcgttagc gttgcaccgg gtcagaccgc acgtattagc 480
tgtagcggtg atagtctgcg taataaagtt tattggtatc agcagaaacc gggtcaggct 540
ccggttctgg ttatttataa aaataatcgt ccgagcggta ttccggaacg ttttagcggt 600
agcaatagcg gtaataccgc aaccctgacc attagcggca cccaggcaga agatgaagcc 660
gattattatt gtcagagcta tgatggtcag aaaagcctgg ttttggtgg tggcaccaag 720
cttaccgttc tg                                                    732
```

<210> 154
<211> 244
<212> PRT
<213> Homo Sapien

<400> 154

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr
    130                 135                 140
Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln Thr Ala Arg Ile Ser
145                 150                 155                 160
Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr Trp Tyr Gln Gln Lys
                165                 170                 175
Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys Asn Asn Arg Pro Ser
            180                 185                 190
Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr Ala Thr
```

```
        195                 200                 205
Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys
    210                 215                 220
Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe Gly Gly Gly Thr Lys
225                 230                 235                 240
Leu Thr Val Leu
```

<210> 155
<211> 747
<212> DNA
<213> Homo Sapien

<400> 155
caggttcaat tggttgaaag cggtggtggt ctggttcagc ctggtggtag cctgcgtctg 60
agctgtgcag caagcggttt acctttagc gattatgtga ttaattgggt tcgtcaggca 120
ccgggtaaag gtctggaatg ggttagcggt attagctggt caggtgttaa tacccattat 180
gcagatagcg tgaaaggtcg ttttaccatt agccgtgata atagcaaaaa taccctgtat 240
ctgcagatga atagcctgcg tgcagaagat accgcagttt attattgtgc acgtctgggt 300
gcaaccgcaa ataatattcg ctataaattt atggatgtgt ggggtcaggg tacactagtt 360
accgttagca gtggtggtgg tggtagcggt ggtggcggat ctggtggcgg tggttcaggt 420
ggtggtggca gtgatatcga actgacccag cctccgagcg ttagcgttgc accgggtcag 480
accgcacgta ttagctgtag cggtgatagt ctgcgtaata aagtttattg gtatcagcag 540
aaaccgggtc aggctccggt tctggttatt tataaaaata atcgtccgag cggtattccg 600
gaacgtttta gcggtagcaa tagcggtaat accgcaaccc tgaccattag cggcacccag 660
gcagaagatg aagccgatta ttattgtcag agctatgatg gtcagaaaag cctggttttt 720
ggtggtggca ccaagcttac cgttctg   747

<210> 156
<211> 249
<212> PRT
<213> Homo Sapien

<400> 156
```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly
        115                 120                 125
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
    130                 135                 140
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
145                 150                 155                 160
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
                165                 170                 175
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
            180                 185                 190
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
        195                 200                 205
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
    210                 215                 220
```

Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
225 230 235 240
Gly Gly Gly Thr Lys Leu Thr Val Leu
245

<210> 157
<211> 723
<212> DNA
<213> Homo Sapien

<400> 157
gatatcgaac tgacccagcc tccgagcgtt agcgttgcac cgggtcagac cgcacgtatt 60
agctgtagcg gtgataatat tggcagcaaa tatgtgcatt ggtatcagca gaaaccgggt 120
caggcaccgg ttctggttat ttatggtgat agcaatcgtc cgagcggtat tccggaacgt 180
tttagcggta gcaatagcgg taataccgca accctgacca ttagcggcac ccaggcagaa 240
gatgaagcag attattattg tacccgtacc agcaccccga ttagcggtgt ttttggtggt 300
ggcaccaagc ttaccgttct gggtggtggt ggtagcggtg gtggtggctc aggtggtggt 360
ggttcacagg ttcaattggt tgaaagtggt ggtggtctgg ttcagcctgg tggtagcctg 420
cgtctgagct gtgcagcaag cggttttacc tttagcgtta atggtatgca ttgggttcgc 480
caggcaccgg gtaaaggtct ggaatgggtt agcgttattg atggtatggg ccatacctat 540
tatgccgata gcgttaaagg tcgttttacc attagccgtg ataatagcaa aaataccctg 600
tatctgcaga tgaatagcct gcgtgcagaa gataccgcag tttattattg cgcacgctat 660
gattatatta aatatggtgc ctttgatccg tggggtcagg gtacactagt taccgttagc 720
agc 723

<210> 158
<211> 241
<212> PRT
<213> Homo Sapien

<400> 158
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val
20 25 30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly
85 90 95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Ser
100 105 110
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Glu
115 120 125
Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys
130 135 140
Ala Ala Ser Gly Phe Thr Phe Ser Val Asn Gly Met His Trp Val Arg
145 150 155 160
Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Val Ile Asp Gly Met
165 170 175
Gly His Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
180 185 190
Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg
195 200 205
Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Tyr Asp Tyr Ile Lys
210 215 220
Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser
225 230 235 240
Ser

<210> 159
<211> 738
<212> DNA
<213> Homo Sapien

<400> 159
gatatcgaac tgacccagcc tccgagcgtt agcgttgcac cgggtcagac cgcacgtatt 60
agctgtagcg gtgataatat tggcagcaaa tatgtgcatt ggtatcagca gaaaccgggt 120
caggcaccgg ttctggttat ttatggtgat agcaatcgtc cgagcggtat tccggaacgt 180
tttagcggta gcaatagcgg taataccgca accctgacca ttagcggcac ccaggcagaa 240
gatgaagcag attattattg tacccgtacc agcaccccga ttagcggtgt ttttggtggt 300
ggcaccaagc ttaccgttct gggtggtggt ggtagcggtg gtggtggctc aggtggtggc 360
ggttctggtg gcggtggttc acaggttcaa ttggttgaaa gtggtggtgg tctggttcag 420
cctggtggta gcctgcgtct gagctgtgca gcaagcggtt ttacctttag cgttaatggt 480
atgcattggg ttcgccaggc accgggtaaa ggtctggaat gggttagcgt tattgatggt 540
atgggccata cctattatgc cgatagcgtt aaaggtcgtt ttaccattag ccgtgataat 600
agcaaaaata ccctgtatct gcagatgaat agcctgcgtg cagaagatac cgcagtttat 660
tattgcgcac gctatgatta tattaaatat ggtgcctttg atccgtgggg tcagggtaca 720
ctagttaccg ttagcagc 738

<210> 160
<211> 246
<212> PRT
<213> Homo Sapien

<400> 160
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1   5   10   15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val
            20   25   30
His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
        35   40   45
Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
    50   55   60
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65   70   75   80
Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly
                85   90   95
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gly Gly Gly Ser
            100   105   110
Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln
        115   120   125
Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser
    130   135   140
Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Val Asn Gly
145   150   155   160
Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser
                165   170   175
Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys Gly
            180   185   190
Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
        195   200   205
Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
    210   215   220
Tyr Asp Tyr Ile Lys Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly Thr
225   230   235   240
Leu Val Thr Val Ser Ser
                245

<210> 161
<211> 723
<212> DNA
<213> Homo Sapien

<400> 161
caggttcaat tggttgaaag cggtggtggt ctggttcagc ctggtggtag cctgcgtctg 60
agctgtgcag caagcggttt tacctttagc gttaatggta tgcattgggt tcgtcaggca 120
ccgggtaaag gtctggaatg ggttagcgtt attgatggta tgggccatac ctattatgcc 180
gatagcgtta aaggtcgttt taccattagc cgtgataata gcaaaaatac cctgtatctg 240
cagatgaata gcctgcgtgc agaagatacc gcagtttatt attgtgcccg ttatgattat 300
attaaatatg gtgcctttga tccgtggggt cagggtacac tagttaccgt tagcagtggt 360
ggtggtggta gcggtggtgg cggatctggt ggcggtggtt cagatatcga actgacccag 420
cctccgagcg ttagcgttgc accgggtcag accgcacgta ttagctgtag cggtgataat 480
attggcagca aatatgtgca ttggtatcag cagaaaccgg gtcaggctcc ggttctggtt 540
atttatggtg atagcaatcg tccgagcggt attccggaac gttttagcgg tagcaatagc 600
ggtaataccg caaccctgac cattagcggc acccaggcag aagatgaagc cgattattat 660
tgcacccgta ccagcacccc gattagcggt gtttttggtg gtggcaccaa gcttaccgtt 720
ctg 723

<210> 162
<211> 241
<212> PRT
<213> Homo Sapien

<400> 162
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Val Asn
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Tyr Asp Tyr Ile Lys Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115   120   125
Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Pro Pro Ser Val
    130   135   140
Ser Val Ala Pro Gly Gln Thr Ala Arg Ile Ser Cys Ser Gly Asp Asn
145   150   155   160
Ile Gly Ser Lys Tyr Val His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
                165   170   175
Pro Val Leu Val Ile Tyr Gly Asp Ser Asn Arg Pro Ser Gly Ile Pro
            180   185   190
Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile
        195   200   205
Ser Gly Thr Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Thr Arg Thr
    210   215   220
Ser Thr Pro Ile Ser Gly Val Phe Gly Gly Gly Thr Lys Leu Thr Val
225   230   235   240
Leu

<210> 163
<211> 738
<212> DNA

<213> Homo Sapien

<400> 163
caggttcaat tggttgaaag cggtggtggt ctggttcagc ctggtggtag cctgcgtctg 60
agctgtgcag caagcggttt acctttagc gttaatggta tgcattgggt tcgtcaggca 120
ccgggtaaag gtctggaatg ggttagcgtt attgatggta tgggccatac ctattatgcc 180
gatagcgtta aaggtcgttt taccattagc cgtgataata gcaaaaatac cctgtatctg 240
cagatgaata gcctgcgtgc agaagatacc gcagtttatt attgtgcccg ttatgattat 300
attaaatatg gtgcctttga tccgtggggt cagggtacac tagttaccgt tagcagtggt 360
ggtggtggta gcggtggtgg cggatctggt ggcggtggtt caggtggtgg tggcagtgat 420
atcgaactga cccagcctcc gagcgttagc gttgcaccgg gtcagaccgc acgtattagc 480
tgtagcggtg ataatattgg cagcaaatat gtgcattggt atcagcagaa accgggtcag 540
gctccggttc tggttattta tggtgatagc aatcgtccga gcggtattcc ggaacgtttt 600
agcggtagca atagcggtaa taccgcaacc ctgaccatta gcggcaccca ggcagaagat 660
gaagccgatt attattgcac ccgtaccagc accccgatta gcggtgtttt tggtggtggc 720
accaagctta ccgttctg 738

<210> 164
<211> 246
<212> PRT
<213> Homo Sapien

<400> 164
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Val Asn
            20   25   30
Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Val Ile Asp Gly Met Gly His Thr Tyr Tyr Ala Asp Ser Val Lys
    50   55   60
Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65   70   75   80
Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
                85   90   95
Arg Tyr Asp Tyr Ile Lys Tyr Gly Ala Phe Asp Pro Trp Gly Gln Gly
            100   105   110
Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
        115   120   125
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr
    130   135   140
Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln Thr Ala Arg Ile Ser
145   150   155   160
Cys Ser Gly Asp Asn Ile Gly Ser Lys Tyr Val His Trp Tyr Gln Gln
                165   170   175
Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Gly Asp Ser Asn Arg
            180   185   190
Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr
        195   200   205
Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu Ala Asp Tyr
    210   215   220
Tyr Cys Thr Arg Thr Ser Thr Pro Ile Ser Gly Val Phe Gly Gly Gly
225   230   235   240
Thr Lys Leu Thr Val Leu
                245

<210> 165
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 165

caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct cagctagcac caagggcccc agcgtgttcc ccctggcccc cagcagcaag 420
agcaccagcg gcggcacagc cgccctgggc tgcctggtga aggactactt ccccgagccc 480
gtgaccgtgt cctggaacag cggagccctg acctccggcg tgcacacctt ccccgccgtg 540
ctgcagagca gcggcctgta cagcctgtcc agcgtggtga cagtgcccag cagcagcctg 600
ggcacccaga cctacatctg caacgtgaac cacaagccca gcaacaccaa ggtggacaag 660
agagtggagc ccaagagctg cgacaagacc cacacctgcc ccccctgccc agccccagag 720
gcagcgggcg gaccctccgt gttcctgttc cccccaagc ccaaggacac cctgatgatc 780
agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga gccacgagga cccagaggtg 840
aagttcaact ggtacgtgga cggcgtggag gtgcacaacg ccaagaccaa gcccagagag 900
gagcagtaca acagcaccta cagggtggtg tccgtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aggaatacaa gtgcaaggtc tccaacaagg ccctgccagc ccccatcgaa 1020
aagaccatca gcaaggccaa gggccagcca cgggagcccc aggtgtacac cctgcccccc 1080
tcccgggagg agatgaccaa gaaccaggtg tccctgacct gtctggtgaa gggcttctac 1140
cccagcgaca tcgccgtgga gtgggagagc aacggccagc ccgagaacaa ctacaagacc 1200
acccccccag tgctggacag cgacggcagc ttcttcctgt acagcaagct gaccgtggac 1260
aagtccaggt ggcagcaggg caacgtgttc agctgcagcg tgatgcacga agcgctgcac 1320
aaccactaca cccagaagag cctgagcctg tcccccggca agggcggctc cggcggaagc 1380
gatatcgtgc tgacacagag ccctgccacc ctgtctctga gccctggcga gagagccacc 1440
ctgagctgcc gggccagcca gttcatcggc tcccgctacc tggcctggta tcagcagaag 1500
cccggacagg ctcccagact gctgatctac ggcgccagca acagagctac cggcgtgccc 1560
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 1620
cccgaggact tcgccaccta ctactgccag cagtactacg actaccccca gaccttcggc 1680
cagggcacca aggtggagat caagggcgga ggcggatccg ggggtggcgg aagtggaggc 1740
ggaggaagcg gaggggggcgg aagccaggtg caattgaaag agtccggccc tgccctggtg 1800
aagcctaccc agaccctgac cctgacatgc accttcagcg gcttcagcct gagcaacaga 1860
ggcggcggag tgggctggat cagacagcct cccggcaagg ccctggaatg gctggcctgg 1920
atcgactggg acgacgacaa gagctacagc accagcctga aaacccggct gaccatctcc 1980
aaggacacca gcaagaacca ggtggtgctc accatgacca acatggaccc cgtggacacc 2040
gccacctatt attgcgcccg gatgcatctg cccctggtgt tcgatagctg gggccaggga 2100
accctggtga cagtgtccag c 2121

<210> 166
<211> 707
<212> PRT
<213> Homo Sapien

<400> 166
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20   25   30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100   105   110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115   120   125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130   135   140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145   150   155   160

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
195 200 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
210 215 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225 230 235 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
245 250 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
450 455 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465 470 475 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
485 490 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
500 505 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
515 520 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
530 535 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly
545 550 555 560
Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met

660 665 670
Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 167
<211> 105
<212> PRT
<213> Homo Sapien

<400> 167
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 168
<211> 315
<212> DNA
<213> Homo Sapien

<400> 168
gacatcgagc tgacccagcc cccttctgtg tctgtggccc ctggccagac cgccagaatc 60
agctgcagcg gcgacagcct gcggaacaag gtgtactggt atcagcagaa gcccggccag 120
gctcccgtgc tggtgatcta caagaacaac cggcccagcg gcatccctga gcggttcagc 180
ggcagcaaca gcggcaatac cgccaccctg accatcagcg gcacccaggc cgaagatgag 240
gccgactact actgccagag ctacgacggc cagaaaagcc tggtgttcgg cggaggcacc 300
aagcttaccg tgctg 315

<210> 169
<211> 633
<212> DNA
<213> Homo Sapien

<400> 169
gacatcgagc tgacccagcc cccttctgtg tctgtggccc ctggccagac cgccagaatc 60
agctgcagcg gcgacagcct gcggaacaag gtgtactggt atcagcagaa gcccggccag 120
gctcccgtgc tggtgatcta caagaacaac cggcccagcg gcatccctga gcggttcagc 180
ggcagcaaca gcggcaatac cgccaccctg accatcagcg gcacccaggc cgaagatgag 240
gccgactact actgccagag ctacgacggc cagaaaagcc tggtgttcgg cggaggcacc 300
aagcttaccg tgctgggcca gcccaaagcc gcccctagcg tgaccctgtt ccccccccagc 360
agcgaggaac tgcaggccaa caaggccacc ctggtctgcc tgatcagcga cttctaccct 420
ggcgccgtga ccgtggcctg gaaggccgac agcagccccg tgaaggccgg cgtggagaca 480
accaccccca gcaagcagag caacaacaag tacgccgcca gcagctacct gagcctgacc 540
cccgagcagt ggaagagcca cagaagctac agctgccagg tcacccacga gggcagcacc 600
gtggagaaaa ccgtggcccc caccgagtgc agc 633

<210> 170

<211> 211
<212> PRT
<213> Homo Sapien

<400> 170

```
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1               5                  10                  15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
            20                  25                  30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
        35                  40                  45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
    50                  55                  60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65                  70                  75                  80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
                85                  90                  95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro
            100                 105                 110
Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys
        115                 120                 125
Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr
    130                 135                 140
Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr
145                 150                 155                 160
Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr
                165                 170                 175
Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys
            180                 185                 190
Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr
        195                 200                 205
Glu Cys Ser
    210
```

<210> 171
<211> 706
<212> PRT
<213> Homo Sapien

<400> 171

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130                 135                 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175
```

Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
195 200 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
210 215 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225 230 235 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
245 250 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Gly Gly Ser Gly Gly Ser Asp Ile Val Leu Thr
450 455 460
Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu
465 470 475 480
Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp Tyr
485 490 495
Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala Ser
500 505 510
Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly
515 520 525
Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe Ala
530 535 540
Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly Gln
545 550 555 560
Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly
565 570 575
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Lys
580 585 590
Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu Thr
595 600 605
Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val Gly
610 615 620
Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp Ile
625 630 635 640
Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg Leu
645 650 655
Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met Thr
660 665 670
Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met His

675 680 685
Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val
690 695 700
Ser Ser
705

<210> 172
<211> 2118
<212> DNA
<213> Homo Sapien

<400> 172
caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct cagctagcac caagggcccc agcgtgttcc ccctggcccc cagcagcaag 420
agcaccagcg gcggcacagc cgccctgggc tgcctggtga aggactactt ccccgagccc 480
gtgaccgtgt cctggaacag cggagccctg acctccggcg tgcacacctt ccccgccgtg 540
ctgcagagca gcggcctgta cagcctgtcc agcgtggtga cagtgcccag cagcagcctg 600
ggcacccaga cctacatctg caacgtgaac cacaagccca gcaacaccaa ggtggacaag 660
agagtggagc ccaagagctg cgacaagacc cacacctgcc ccccctgccc agccccagag 720
gcagcgggcg gaccctccgt gttcctgttc cccccaagc ccaaggacac cctgatgatc 780
agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga gccacgagga cccagaggtg 840
aagttcaact ggtacgtgga cggcgtggag gtgcacaacg ccaagaccaa gcccagagag 900
gagcagtaca acagcaccta cagggtggtg tccgtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aggaatacaa gtgcaaggtc tccaacaagg ccctgccagc ccccatcgaa 1020
aagaccatca gcaaggccaa gggccagcca cgggagcccc aggtgtacac cctgcccccc 1080
tcccgggagg agatgaccaa gaaccaggtg tccctgacct gtctggtgaa gggcttctac 1140
cccagcgaca tcgccgtgga gtgggagagc aacggccagc ccgagaacaa ctacaagacc 1200
acccccccag tgctggacag cgacggcagc ttcttcctgt acagcaagct gaccgtggac 1260
aagtccaggt ggcagcaggg caacgtgttc agctgcagcg tgatgcacga agcgctgcac 1320
aaccactaca cccagaagag cctgagcctg tccccggcg gcggctccgg cggaagcgat 1380
atcgtgctga cacagagccc tgccaccctg tctctgagcc ctggcgagag agccaccctg 1440
agctgccggg ccagccagtt catcggctcc cgctacctgg cctggtatca gcagaagccc 1500
ggacaggctc ccagactgct gatctacggc gccagcaaca gagctaccgg cgtgcccgcc 1560
agattttctg gcagcggcag cggcaccgac ttcaccctga ccatcagcag cctggaaccc 1620
gaggacttcg ccacctacta ctgccagcag tactacgact acccccagac cttcggccag 1680
ggcaccaagg tggagatcaa gggcggaggc ggatccgggg gtggcggaag tggaggcgga 1740
ggaagcggag ggggcggaag ccaggtgcaa ttgaaagagt ccggccctgc cctggtgaag 1800
cctacccaga ccctgaccct gacatgcacc ttcagcggct tcagcctgag caacagaggc 1860
ggcggagtgg gctggatcag acagcctccc ggcaaggccc tggaatggct ggcctggatc 1920
gactgggacg acgacaagag ctacagcacc agcctgaaaa cccggctgac catctccaag 1980
gacaccagca agaaccaggt ggtgctcacc atgaccaaca tggaccccgt ggacaccgcc 2040
acctattatt gcgcccggat gcatctgccc ctggtgttcg atagctgggg ccagggaacc 2100
ctggtgacag tgtccagc 2118

<210> 173
<211> 707
<212> PRT
<213> Homo Sapien

<400> 173
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val

```
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130                 135                 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
        195                 200                 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
    210                 215                 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225                 230                 235                 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
                245                 250                 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
            260                 265                 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
        275                 280                 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
    290                 295                 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305                 310                 315                 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
                325                 330                 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
            340                 345                 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
        355                 360                 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
    370                 375                 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385                 390                 395                 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                405                 410                 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
            420                 425                 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
        435                 440                 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
    450                 455                 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465                 470                 475                 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
                485                 490                 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
            500                 505                 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
        515                 520                 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
    530                 535                 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly
545                 550                 555                 560
```

Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met
660 665 670
Thr Asn Met Asp Ala Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 174
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 174
caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct cagctagcac caagggcccc agcgtgttcc ccctggcccc cagcagcaag 420
agcaccagcg gcggcacagc cgccctgggc tgcctggtga aggactactt ccccgagccc 480
gtgaccgtgt cctggaacag cggagccctg acctccggcg tgcacacctt ccccgccgtg 540
ctgcagagca gcggcctgta cagcctgtcc agcgtggtga cagtgcccag cagcagcctg 600
ggcacccaga cctacatctg caacgtgaac cacaagccca gcaacaccaa ggtggacaag 660
agagtggagc ccaagagctg cgacaagacc cacacctgcc ccccctgccc agccccagag 720
gcagcgggcg gaccctccgt gttcctgttc cccccaagc ccaaggacac cctgatgatc 780
agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga gccacgagga cccagaggtg 840
aagttcaact ggtacgtgga cggcgtggag gtgcacaacg ccaagaccaa gcccagagag 900
gagcagtaca acagcaccta cagggtggtg tccgtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aggaatacaa gtgcaaggtc tccaacaagg ccctgccagc ccccatcgaa 1020
aagaccatca gcaaggccaa gggccagcca cgggagcccc aggtgtacac cctgcccccc 1080
tcccgggagg agatgaccaa gaaccaggtg tccctgacct gtctggtgaa gggcttctac 1140
cccagcgaca tcgccgtgga gtgggagagc aacggccagc ccgagaacaa ctacaagacc 1200
acccccccag tgctggacag cgacggcagc ttcttcctgt acagcaagct gaccgtggac 1260
aagtccaggt ggcagcaggg caacgtgttc agctgcagcg tgatgcacga agcgctgcac 1320
aaccactaca cccagaagag cctgagcctg tcccccggca agggcggctc cggcggaagc 1380
gatatcgtgc tgacacagag ccctgccacc ctgtctctga gccctggcga gagagccacc 1440
ctgagctgcc gggccagcca gttcatcggc tcccgctacc tggcctggta tcagcagaag 1500
cccggacagg ctcccagact gctgatctac ggcgccagca acagagctac cggcgtgccc 1560
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 1620
cccgaggact tcgccaccta ctactgccag cagtactacg actaccccca gaccttcggc 1680
cagggcacca aggtggagat caagggcgga ggcggatccg ggggtggcgg aagtggaggc 1740
ggaggaagcg gaggggggcgg aagccaggtg caattgaaag agtccggccc tgccctggtg 1800
aagcctaccc agaccctgac cctgacatgc accttcagcg gcttcagcct gagcaacaga 1860
ggcggcggag tgggctggat cagacagcct cccggcaagg ccctggaatg gctggcctgg 1920
atcgactggg acgacgacaa gagctacagc accagcctga aaacccggct gaccatctcc 1980
aaggacacca gcaagaacca ggtggtgctc accatgacca acatggacgc cgtggacacc 2040
gccacctatt attgcgcccg gatgcatctg cccctggtgt tcgatagctg gggccaggga 2100

accctggtga cagtgtccag c 2121

<210> 175
<211> 707
<212> PRT
<213> Homo Sapien

<400> 175

```
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50                  55                  60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65                  70                  75                  80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100                 105                 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115                 120                 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130                 135                 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145                 150                 155                 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165                 170                 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180                 185                 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
        195                 200                 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
    210                 215                 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225                 230                 235                 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
                245                 250                 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
            260                 265                 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
        275                 280                 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
    290                 295                 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305                 310                 315                 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
                325                 330                 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
            340                 345                 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
        355                 360                 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
    370                 375                 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385                 390                 395                 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
                405                 410                 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
            420                 425                 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
```

435 440 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
450 455 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465 470 475 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
485 490 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
500 505 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
515 520 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
530 535 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly
545 550 555 560
Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met
660 665 670
Thr Asn Met Thr Ala Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 176
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 176
caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct cagctagcac caagggcccc agcgtgttcc ccctggcccc cagcagcaag 420
agcaccagcg gcggcacagc cgccctgggc tgcctggtga aggactactt ccccgagccc 480
gtgaccgtgt cctggaacag cggagccctg acctccggcg tgcacacctt ccccgccgtg 540
ctgcagagca gcggcctgta cagcctgtcc agcgtggtga cagtgcccag cagcagcctg 600
ggcacccaga cctacatctg caacgtgaac cacaagccca gcaacaccaa ggtggacaag 660
agagtggagc ccaagagctg cgacaagacc cacacctgcc ccccctgccc agccccagag 720
gcagcgggcg gaccctccgt gttcctgttc cccccaagc ccaaggacac cctgatgatc 780
agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga gccacgagga cccagaggtg 840
aagttcaact ggtacgtgga cggcgtggag gtgcacaacg ccaagaccaa gcccagagag 900
gagcagtaca acagcaccta cagggtggtg tccgtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aggaatacaa gtgcaaggtc tccaacaagg ccctgccagc ccccatcgaa 1020
aagaccatca gcaaggccaa gggccagcca cgggagcccc aggtgtacac cctgcccccc 1080
tcccgggagg agatgaccaa gaaccaggtg tccctgacct gtctggtgaa gggcttctac 1140
cccagcgaca tcgccgtgga gtgggagagc aacggccagc ccgagaacaa ctacaagacc 1200

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acccccccag tgctggacag cgacggcagc ttcttcctgt acagcaagct gaccgtggac 1260
aagtccaggt ggcagcaggg caacgtgttc agctgcagcg tgatgcacga agcgctgcac 1320
aaccactaca cccagaagag cctgagcctg tcccccggca agggcggctc cggcggaagc 1380
gatatcgtgc tgacacagag ccctgccacc ctgtctctga gccctggcga gagagccacc 1440
ctgagctgcc gggccagcca gttcatcggc tcccgctacc tggcctggta tcagcagaag 1500
cccggacagg ctcccagact gctgatctac ggcgccagca acagagctac cggcgtgccc 1560
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 1620
cccgaggact tcgccaccta ctactgccag cagtactacg actaccccca gaccttcggc 1680
cagggcacca aggtggagat caagggcgga ggcggatccg ggggtggcgg aagtggaggc 1740
ggaggaagcg gaggggggcgg aagccaggtg caattgaaag agtccggccc tgccctggtg 1800
aagcctaccc agaccctgac cctgacatgc accttcagcg gcttcagcct gagcaacaga 1860
ggcggcggag tgggctggat cagacagcct cccggcaagg ccctggaatg gctggcctgg 1920
atcgactggg acgacgacaa gagctacagc accagcctga aaacccggct gaccatctcc 1980
aaggacacca gcaagaacca ggtggtgctc accatgacca acatgaccgc cgtggacacc 2040
gccacctatt attgcgcccg gatgcatctg cccctggtgt tcgatagctg gggccaggga 2100
accctggtga cagtgtccag c                                           2121
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<210> 177
<211> 464
<212> PRT
<213> Homo Sapien

<400> 177

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Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1               5                  10                  15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20                  25                  30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35                  40                  45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
    50                  55                  60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65                  70                  75                  80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
                85                  90                  95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly
            100                 105                 110
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
        115                 120                 125
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
    130                 135                 140
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
145                 150                 155                 160
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
                165                 170                 175
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
            180                 185                 190
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
        195                 200                 205
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
    210                 215                 220
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
225                 230                 235                 240
Thr Leu Val Thr Val Ser Ser Gly Gly Ser Gly Gly Ser Asp Ile Glu
                245                 250                 255
Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln Thr Ala Arg
            260                 265                 270
Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr Trp Tyr Gln
        275                 280                 285
Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys Asn Asn Arg
    290                 295                 300
Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr
305                 310                 315                 320
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Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu Ala Asp Tyr
325 330 335
Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe Gly Gly Gly
340 345 350
Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Ser Val Thr
355 360 365
Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu
370 375 380
Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr Val Ala Trp
385 390 395 400
Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr Thr Thr Pro
405 410 415
Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu
420 425 430
Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys Gln Val Thr
435 440 445
His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr Glu Cys Ser
450 455 460

<210> 178
<211> 1392
<212> DNA
<213> Homo Sapien

<400> 178
gatatcgtgc tgacacagag ccctgccacc ctgtctctga gccctggcga gagagccacc 60
ctgagctgcc gggccagcca gttcatcggc tcccgctacc tggcctggta tcagcagaag 120
cccggacagg ctcccagact gctgatctac ggcgccagca acagagctac cggcgtgccc 180
gccagatttt ctggcagcgg cagcggcacc gacttcaccc tgaccatcag cagcctggaa 240
cccgaggact tcgccaccta ctactgccag cagtactacg actacccca gaccttcggc 300
cagggcacca aggtggagat caagggcgga ggcggatccg ggggtggcgg aagtggaggc 360
ggaggaagcg gaggggcgg aagccaggtg caattgaaag agtccggccc tgccctggtg 420
aagcctaccc agaccctgac cctgacatgc accttcagcg gcttcagcct gagcaacaga 480
ggcggcggag tgggctggat cagacagcct cccggcaagg ccctggaatg gctggcctgg 540
atcgactggg acgacgacaa gagctacagc accagcctga aaacccggct gaccatctcc 600
aaggacacca gcaagaacca ggtggtgctc accatgacca acatggaccc cgtggacacc 660
gccacctatt attgcgcccg gatgcatctg cccctggtgt tcgatagctg gggccaggga 720
accctggtga cagtgtccag cggcggctcc ggcggaagcg acatcgagct gacccagccc 780
ccttctgtgt ctgtggcgcc cgggcagacc gccagaatca gctgcagcgg cgacagcctg 840
cggaacaagg tgtactggta tcagcagaag cccggccagg ctcccgtgct ggtgatctac 900
aagaacaacc ggcccagcgg catccctgag cggttcagcg gcagcaacag cggcaatacc 960
gccaccctga ccatcagcgg cacccaggcc gaagatgagg ccgactacta ctgccagagc 1020
tacgacggcc agaaaagcct ggtgttcggc ggaggcacca agcttaccgt gctgggccag 1080
cccaaagccg cccctagcgt gaccctgttc ccccccagca gcgaggaact gcaggccaac 1140
aaggccaccc tggtctgcct gatcagcgac ttctaccctg gcgccgtgac cgtggcctgg 1200
aaggccgaca gcagccccgt gaaggccggc gtggagacaa ccaccccag caagcagagc 1260
aacaacaagt acgccgccag cagctacctg agcctgaccc ccgagcagtg gaagagccac 1320
agaagctaca gctgccaggt cacccacgag ggcagcaccg tggagaaaac cgtggccccc 1380
accgagtgca gc 1392

<210> 179
<211> 124
<212> PRT
<213> Homo Sapien

<400> 179
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
100 105 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 180
<211> 372
<212> DNA
<213> Homo Sapien

<400> 180
caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct ca 372

<210> 181
<211> 454
<212> PRT
<213> Homo Sapien

<400> 181
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
100 105 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
130 135 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
195 200 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
210 215 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225 230 235 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp

245 250 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Lys
450

<210> 182
<211> 1362
<212> DNA
<213> Homo Sapien

<400> 182
caggtgcaat tggtcgagtc tggcggagga ctggtgcagc ctggtggcag cctgagactg 60
agctgcgccg ccagcggctt caccttcagc gactacgtga tcaactgggt gcgacaggcc 120
cctggaaagg gcctggaatg ggtgtccggc atctcttggt ctggcgtgaa cacccactac 180
gccgacagcg tgaagggccg gttcaccatc agccgggaca acagcaagaa caccctgtac 240
ctgcagatga acagcctgag agccgaggac accgccgtgt actactgtgc cagactgggc 300
gccaccgcca acaacatccg gtacaagttc atggacgtgt ggggccaggg cacactggtg 360
accgtcagct cagctagcac caagggcccc agcgtgttcc ccctggcccc cagcagcaag 420
agcaccagcg gcggcacagc cgccctgggc tgcctggtga aggactactt ccccgagccc 480
gtgaccgtgt cctggaacag cggagccctg acctccggcg tgcacacctt ccccgccgtg 540
ctgcagagca gcggcctgta cagcctgtcc agcgtggtga cagtgcccag cagcagcctg 600
ggcacccaga cctacatctg caacgtgaac cacaagccca gcaacaccaa ggtggacaag 660
agagtggagc ccaagagctg cgacaagacc cacacctgcc ccccctgccc agccccagag 720
gcagcgggcg gaccctccgt gttcctgttc ccccccaagc ccaaggacac cctgatgatc 780
agcaggaccc ccgaggtgac ctgcgtggtg gtggacgtga gccacgagga cccagaggtg 840
aagttcaact ggtacgtgga cggcgtggag gtgcacaacg ccaagaccaa gcccagagag 900
gagcagtaca acagcaccta cagggtggtg tccgtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aggaatacaa gtgcaaggtc tccaacaagg ccctgccagc ccccatcgaa 1020
aagaccatca gcaaggccaa gggccagcca cgggagcccc aggtgtacac cctgcccccc 1080
tcccgggagg agatgaccaa gaaccaggtg tccctgacct gtctggtgaa gggcttctac 1140
cccagcgaca tcgccgtgga gtgggagagc aacggccagc ccgagaacaa ctacaagacc 1200
acccccccag tgctggacag cgacggcagc ttcttcctgt acagcaagct gaccgtggac 1260
aagtccaggt ggcagcaggg caacgtgttc agctgcagcg tgatgcacga ggccctgcac 1320
aaccactaca cccagaagag cctgagcctg tcccccggca ag 1362

<210> 183
<211> 108
<212> PRT
<213> Homo Sapien

<400> 183
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
                85   90   95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
            100   105

<210> 184
<211> 324
<212> DNA
<213> Homo Sapien

<400> 184
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgactta ttattgccag cagtattatg attatcctca gacctttggc 300
cagggtacga aagttgaaat taaa   324

<210> 185
<211> 215
<212> PRT
<213> Homo Sapien

<400> 185
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1   5   10   15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg
            20   25   30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
        35   40   45
Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
    50   55   60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65   70   75   80
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro
                85   90   95
Gln Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
            100   105   110
Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
        115   120   125
Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
    130   135   140
Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145   150   155   160
Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
                165   170   175
Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
            180   185   190
Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
        195   200   205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 186
<211> 645
<212> DNA
<213> Homo Sapien

<400> 186
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gtttattggt tctcgttatc tggcttggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatttat ggtgcttcta atcgtgcaac tggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgactta ttattgccag cagtattatg attatcctca gacctttggc 300
cagggtacga aagttgaaat taaacgtacg gtggccgctc ccagcgtgtt catcttcccc 360
cccagcgacg agcagctgaa gagcggcacc gccagcgtgg tgtgcctgct gaacaacttc 420
taccccgggg aggccaaggt gcagtggaag gtggacaacg ccctgcagag cggcaacagc 480
caggagagcg tcaccgagca ggacagcaag gactccacct acagcctgag cagcaccctg 540
accctgagca aggccgacta cgagaagcat aaggtgtacg cctgcgaggt gacccaccag 600
ggcctgtcca gccccgtgac caagagcttc aacaggggcg agtgc 645

<210> 187
<211> 699
<212> PRT
<213> Homo Sapien

<400> 187
Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
20 25 30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
50 55 60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
100 105 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
115 120 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
130 135 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145 150 155 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
165 170 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
180 185 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
195 200 205
Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys
210 215 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225 230 235 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
245 250 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
260 265 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn

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        275                 280                 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    290                 295                 300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
                325                 330                 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            340                 345                 350
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
        355                 360                 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385                 390                 395                 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                405                 410                 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445
Lys Gly Gly Ser Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly Gly
    450                 455                 460
Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
465                 470                 475                 480
Gly Phe Thr Phe Ser Asp Tyr Val Ile Asn Trp Val Arg Gln Ala Pro
                485                 490                 495
Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Ser Gly Val Asn
            500                 505                 510
Thr His Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
        515                 520                 525
Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
    530                 535                 540
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Leu Gly Ala Thr Ala Asn Asn
545                 550                 555                 560
Ile Arg Tyr Lys Phe Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr
                565                 570                 575
Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
            580                 585                 590
Gly Ser Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro
        595                 600                 605
Gly Gln Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys
    610                 615                 620
Val Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile
625                 630                 635                 640
Tyr Lys Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
                645                 650                 655
Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
            660                 665                 670
Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu
        675                 680                 685
Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
    690                 695
```

<210> 188
<211> 2097
<212> DNA
<213> Homo Sapien

<400> 188
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120

cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctcagct 360
agcaccaagg gccccagcgt gttccccctg gccccagca gcaagagcac cagcggcggc 420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg 480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc 540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac 600
atctgcaacg tgaaccacaa gcccagcaac accaaggtgg acaagagagt ggagcccaag 660
agctgcgaca agacccacac ctgccccccc tgcccagccc cagaggcagc gggcggaccc 720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag 780
gtgacctgcg tggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac 840
gtggacggcg tggaggtgca caacgccaag accaagccca gagaggagca gtacaacagc 900
acctacaggg tggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa 960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag 1020
gccaagggcc agccacggga gccccaggtg tacaccctgc ccccctcccg ggaggagatg 1080
accaagaacc aggtgtccct gacctgtctg gtgaagggct tctaccccag cgacatcgcc 1140
gtggagtggg agagcaacgg ccagcccgag aacaactaca agaccacccc cccagtgctg 1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag 1260
cagggcaacg tgttcagctg cagcgtgatg cacgaagcgc tgcacaacca ctacacccag 1320
aagagcctga gcctgtcccc cggcaagggc ggctccggcg gaagccaggt tcaattggtt 1380
gaaagcggtg gtggtctggt tcagcctggt ggtagcctgc gtctgagctg tgcagcaagc 1440
ggttttacct ttagcgatta tgtgattaat tgggttcgtc aggcaccggg taaaggtctg 1500
gaatgggtta gcggtattag ctggtcaggt gttaataccc attatgcaga tagcgtgaaa 1560
ggtcgtttta ccattagccg tgataatagc aaaaataccc tgtatctgca gatgaatagc 1620
ctgcgtgcag aagataccgc agtttattat tgtgcacgtc tgggtgcaac cgcaaataat 1680
attcgctata aatttatgga tgtgtggggt cagggtacac tagttaccgt tagcagtggt 1740
ggtggtggta gcggtggtgg cggatctggt ggcggtggca gtgatatcga actgacccag 1800
cctccgagcg ttagcgttgc accgggtcag accgcacgta ttagctgtag cggtgatagt 1860
ctgcgtaata aagtttattg gtatcagcag aaaccgggtc aggctccggt tctggttatt 1920
tataaaaata atcgtccgag cggtattccg gaacgtttta gcggtagcaa tagcggtaat 1980
accgcaaccc tgaccattag cggcacccag gcagaagatg aagccgatta ttattgtcag 2040
agctatgatg gtcagaaaag cctggttttt ggtggtggca ccaagcttac cgttctg 2097

<210> 189
<211> 704
<212> PRT
<213> Homo Sapien

<400> 189

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Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
 1               5                  10                  15
Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg
            20                  25                  30
Gly Gly Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45
Trp Leu Ala Trp Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser
    50                  55                  60
Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80
Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95
Cys Ala Arg Met His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly
            100                 105                 110
Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
        115                 120                 125
Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu
    130                 135                 140
Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp
145                 150                 155                 160
Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu
                165                 170                 175
Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser
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                180                 185                 190
Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
        195                 200                 205
Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys
    210                 215                 220
Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Ala Gly Gly Pro
225                 230                 235                 240
Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
                245                 250                 255
Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
            260                 265                 270
Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
        275                 280                 285
Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val
    290                 295                 300
Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
305                 310                 315                 320
Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys
                325                 330                 335
Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
            340                 345                 350
Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
        355                 360                 365
Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
    370                 375                 380
Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
385                 390                 395                 400
Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
                405                 410                 415
Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
            420                 425                 430
Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
        435                 440                 445
Lys Gly Gly Ser Gly Gly Ser Gln Val Gln Leu Val Glu Ser Gly Gly
    450                 455                 460
Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser
465                 470                 475                 480
Gly Phe Thr Phe Ser Asp Tyr Val Ile Asn Trp Val Arg Gln Ala Pro
                485                 490                 495
Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Ser Trp Ser Gly Val Asn
            500                 505                 510
Thr His Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
        515                 520                 525
Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
    530                 535                 540
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Leu Gly Ala Thr Ala Asn Asn
545                 550                 555                 560
Ile Arg Tyr Lys Phe Met Asp Val Trp Gly Gln Gly Thr Leu Val Thr
                565                 570                 575
Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
            580                 585                 590
Gly Ser Gly Gly Gly Gly Ser Asp Ile Glu Leu Thr Gln Pro Pro Ser
        595                 600                 605
Val Ser Val Ala Pro Gly Gln Thr Ala Arg Ile Ser Cys Ser Gly Asp
    610                 615                 620
Ser Leu Arg Asn Lys Val Tyr Trp Tyr Gln Gln Lys Pro Gly Gln Ala
625                 630                 635                 640
Pro Val Leu Val Ile Tyr Lys Asn Asn Arg Pro Ser Gly Ile Pro Glu
                645                 650                 655
Arg Phe Ser Gly Ser Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser
            660                 665                 670
Gly Thr Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp
        675                 680                 685
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Gly Gln Lys Ser Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
690 695 700

<210> 190
<211> 2112
<212> DNA
<213> Homo Sapien

<400> 190
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtct aatcgtggtg gtggtgtggg ttggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gcttggatcg attgggatga tgataagtct 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcaggtg 240
gtgctgacta tgaccaacat ggacccggtg gatacggcca cctattattg cgcgcgtatg 300
catcttcctc ttgtttttga ttcttggggc caaggcaccc tggtgacggt tagctcagct 360
agcaccaagg gccccagcgt gttccccctg gccccagca gcaagagcac cagcggcggc 420
acagccgccc tgggctgcct ggtgaaggac tacttccccg agcccgtgac cgtgtcctgg 480
aacagcggag ccctgacctc cggcgtgcac accttccccg ccgtgctgca gagcagcggc 540
ctgtacagcc tgtccagcgt ggtgacagtg cccagcagca gcctgggcac ccagacctac 600
atctgcaacg tgaaccacaa gcccagcaac accaaggtgg acaagagagt ggagcccaag 660
agctgcgaca agacccacac ctgccccccc tgcccagccc cagaggcagc gggcggaccc 720
tccgtgttcc tgttcccccc caagcccaag gacaccctga tgatcagcag gacccccgag 780
gtgacctgcg tggtggtgga cgtgagccac gaggacccag aggtgaagtt caactggtac 840
gtggacggcg tggaggtgca caacgccaag accaagccca gagaggagca gtacaacagc 900
acctacaggg tggtgtccgt gctgaccgtg ctgcaccagg actggctgaa cggcaaggaa 960
tacaagtgca aggtctccaa caaggccctg ccagccccca tcgaaaagac catcagcaag 1020
gccaagggcc agccacggga gccccaggtg tacaccctgc ccccctcccg ggaggagatg 1080
accaagaacc aggtgtccct gacctgtctg gtgaagggct tctaccccag cgacatcgcc 1140
gtggagtggg agagcaacgg ccagcccgag aacaactaca agaccacccc cccagtgctg 1200
gacagcgacg gcagcttctt cctgtacagc aagctgaccg tggacaagtc caggtggcag 1260
cagggcaacg tgttcagctg cagcgtgatg cacgaagcgc tgcacaacca ctacacccag 1320
aagagcctga gcctgtcccc cggcaagggc ggctccggcg gaagccaggt tcaattggtt 1380
gaaagcggtg gtggtctggt tcagcctggt ggtagcctgc gtctgagctg tgcagcaagc 1440
ggttttacct ttagcgatta tgtgattaat tgggttcgtc aggcaccggg taaaggtctg 1500
gaatgggtta gcggtattag ctggtcaggt gttaataccc attatgcaga tagcgtgaaa 1560
ggtcgtttta ccattagccg tgataatagc aaaaataccc tgtatctgca gatgaatagc 1620
ctgcgtgcag aagataccgc agtttattat tgtgcacgtc tgggtgcaac cgcaaataat 1680
attcgctata aatttatgga tgtgtggggt cagggtacac tagttaccgt tagcagtggt 1740
ggtggtggta gcggtggtgg cggatctggt ggcggtggtt caggtggtgg tggcagtgat 1800
atcgaactga cccagcctcc gagcgttagc gttgcaccgg gtcagaccgc acgtattagc 1860
tgtagcggtg atagtctgcg taataaagtt tattggtatc agcagaaacc gggtcaggct 1920
ccggttctgg ttatttataa aaataatcgt ccgagcggta ttccggaacg ttttagcggt 1980
agcaatagcg gtaataccgc aaccctgacc attagcggca cccaggcaga agatgaagcc 2040
gattattatt gtcagagcta tgatggtcag aaaagcctgg tttttggtgg tggcaccaag 2100
cttaccgttc tg 2112

<210> 191
<211> 105
<212> PRT
<213> Homo Sapien

<400> 191
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65 70 75 80

Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 192
<211> 315
<212> DNA
<213> Homo Sapien

<400> 192
gacatcgagc tgactcagcc ccctagcgtg tcagtggctc ctggccagac cgctagaatt 60
agctgtagcg gcgatagcct gcgtaacaag gtctactggt atcagcagaa gcccggccag 120
gcccctgtgc tggtcatcta taagaacaat aggcctagcg gcatccccga gcggtttagc 180
ggctctaata gcggcaacac cgctaccctg actattagcg gcactcaggc cgaggacgag 240
gccgactact actgtcagtc ctacgacggc cagaagtcac tggtctttgg cggcggaact 300
aagctgaccg tgctg 315

<210> 193
<211> 211
<212> PRT
<213> Homo Sapien

<400> 193
Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro
100 105 110
Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys
115 120 125
Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr
130 135 140
Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr
145 150 155 160
Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr
165 170 175
Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys
180 185 190
Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr
195 200 205
Glu Cys Ser
210

<210> 194
<211> 633
<212> DNA
<213> Homo Sapien

<400> 194
gacatcgagc tgactcagcc ccctagcgtg tcagtggctc ctggccagac cgctagaatt 60
agctgtagcg gcgatagcct gcgtaacaag gtctactggt atcagcagaa gcccggccag 120

gcccctgtgc tggtcatcta taagaacaat aggcctagcg gcatccccga gcggtttagc 180
ggctctaata gcggcaacac cgctaccctg actattagcg gcactcaggc cgaggacgag 240
gccgactact actgtcagtc ctacgacggc cagaagtcac tggtctttgg cggcggaact 300
aagctgaccg tgctgggaca gcctaaggct gcccccagcg tgaccctgtt ccccccccagc 360
agcgaggagc tgcaggccaa caaggccacc ctggtgtgcc tgatcagcga cttctaccca 420
ggcgccgtga ccgtggcctg gaaggccgac agcagccccg tgaaggccgg cgtggagacc 480
accaccccca gcaagcagag caacaacaag tacgccgcca gcagctacct gagcctgacc 540
cccgagcagt ggaagagcca caggtcctac agctgccagg tgacccacga gggcagcacc 600
gtggaaaaga ccgtggcccc aaccgagtgc agc 633

<210> 195
<211> 707
<212> PRT
<213> Homo Sapien

<400> 195
Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1   5   10   15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20   25   30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35   40   45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
    50   55   60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65   70   75   80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85   90   95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
            100   105   110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
        115   120   125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
    130   135   140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145   150   155   160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
                165   170   175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
            180   185   190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
        195   200   205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
    210   215   220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225   230   235   240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
                245   250   255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
            260   265   270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
        275   280   285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
    290   295   300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305   310   315   320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
                325   330   335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
            340   345   350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
        355   360   365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile

370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
450 455 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465 470 475 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
485 490 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
500 505 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
515 520 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
530 535 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly
545 550 555 560
Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met
660 665 670
Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 196
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 196
caggtgcagc tggtggaatc aggcggagga ctggtccagc ctggcggatc acttagactg 60
agctgtgccg ctagtggctt cacctttagc gactatgtga ttaactgggt ccgacaggcc 120
cctggcaagg gactggaatg ggtgtcaggc attagttgga gcggcgtgaa cactcactac 180
gccgatagcg tgaagggccg gttcactatt agccgggata actctaagaa caccctgtac 240
ctgcagatga atagcctgag agccgaggac accgccgtct actactgcgc tagactgggc 300
gctaccgcta acaacatccg ctataagttc atggacgtgt ggggccaggg caccctggtc 360
acagtgtctt cagctagcac taagggcccc tcagtgttcc ccctggcccc tagctctaag 420
tctactagcg gtggcaccgc cgctctgggc tgcctggtca aggactactt ccccgagccc 480
gtgaccgtgt cttggaatag cggcgctctg actagcggag tgcacacctt ccccgccgtg 540
ctgcagtcta gcggcctgta tagcctgtct agcgtcgtga ccgtgcctag ctctagcctg 600
ggcactcaga cctatatctg taacgtgaac cacaagccta gtaacactaa ggtggacaag 660
cgggtggaac ctaagtcttg cgataagact cacacctgtc ccccctgccc tgccccagaa 720

gctgctggcg gacctagcgt gttcctgttc ccacctaagc ctaaagacac cctgatgatt 780
agtaggaccc ccgaagtgac ctgcgtggtg gtggacgtca gccacgagga ccctgaagtg 840
aagttcaatt ggtatgtgga cggcgtggaa gtgcacaacg ctaagactaa gcctagagag 900
gaacagtata actccaccta tagggtggtg tcagtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aagagtataa gtgtaaagtc tctaacaagg ccctgcctgc ccctatcgaa 1020
aagactatct ctaaggctaa gggccagcct agagaacccc aggtctacac cctgcccccc 1080
agtagagaag agatgactaa gaatcaggtg tccctgacct gtctggtcaa gggcttctac 1140
cctagcgata tcgccgtgga gtgggagtct aacggccagc ccgagaacaa ctataagact 1200
acccccccctg tgctggatag cgacggctct ttcttcctgt actctaaact gaccgtggac 1260
aagtctaggt ggcagcaggg caacgtgttc agctgtagcg tgatgcacga ggccctgcac 1320
aatcactaca ctcagaagtc actgagcctg agtcccggca agggcggctc aggcggtagc 1380
gatatcgtgc tgactcagtc acccgctacc ctgagtctga gccctggcga gcgggctaca 1440
ctgagctgta gagctagtca gtttatcggc tcacgctacc tggcctggta tcagcagaag 1500
cccggccagg cccctagact gctgatctac ggcgctagta atagagctac cggcgtgccc 1560
gctaggttta gcggctcagg atcaggcacc gactttaccc tgactattag tagcctggaa 1620
cccgaggact tcgctaccta ctactgtcag cagtactacg actaccctca gaccttcggc 1680
cagggaacta aggtcgagat taagggcggt ggcggtagcg gcggaggcgg atcaggtggt 1740
ggtggtagtg gcggcggagg tagtcaggtc cagctgaaag agtcaggccc tgccctggtc 1800
aagcctactc agaccctgac cctgacctgc acttttagcg gctttagcct gagtaataga 1860
ggcggcggag tgggctggat tagacagcct ccaggcaaag ccctggagtg gctggcctgg 1920
atcgactggg acgacgataa gtcctactcc actagcctga aaactaggct gacaatcagc 1980
aaggacacta gtaaaaacca ggtggtgctg actatgacta atatggaccc cgtggacacc 2040
gctacctatt attgcgctag aatgcacctc ccactggtgt tcgatagctg gggtcaggga 2100
actctggtca cagtcagtag c 2121

<210> 197
<211> 105
<212> PRT
<213> Homo Sapien

<400> 197
Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1   5   10   15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
            20   25   30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
        35   40   45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
    50   55   60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65   70   75   80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
                85   90   95
Gly Gly Gly Thr Lys Leu Thr Val Leu
            100   105

<210> 198
<211> 315
<212> DNA
<213> Homo Sapien

<400> 198
tcttacgagc tgacccagcc cccttccgtg tctgtggctc ctggccagac cgccagaatc 60
tcttgctccg gcgactccct gcggaacaag gtgtactggt atcagcagaa gcccggccag 120
gcccctgtgc tggtcatcta caagaacaac cggccctccg gcatccccga gagattctct 180
ggctccaact ccggcaacac cgccaccctg acaatctctg gcacacaggc cgaggacgag 240
gccgactact actgccagtc ctacgacggc cagaaatcac tggtgttcgg cggaggcacc 300
aagctgacag tgctg 315

<210> 199
<211> 211
<212> PRT

<213> Homo Sapien

<400> 199

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Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1               5                  10                  15
Thr Ala Arg Ile Ser Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
            20                  25                  30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
        35                  40                  45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
    50                  55                  60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu Asp Glu
65                  70                  75                  80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
                85                  90                  95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro
            100                 105                 110
Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys
        115                 120                 125
Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr
    130                 135                 140
Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr
145                 150                 155                 160
Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr
                165                 170                 175
Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys
            180                 185                 190
Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr
        195                 200                 205
Glu Cys Ser
    210
```

<210> 200
<211> 633
<212> DNA
<213> Homo Sapien

<400> 200

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tcttacgagc tgacccagcc cccttccgtg tctgtggctc ctggccagac cgccagaatc 60
tcttgctccg gcgactccct gcggaacaag gtgtactggt atcagcagaa gcccggccag 120
gcccctgtgc tggtcatcta caagaacaac cggccctccg gcatccccga gagattctct 180
ggctccaact ccggcaacac cgccaccctg acaatctctg gcacacaggc cgaggacgag 240
gccgactact actgccagtc ctacgacggc cagaaatcac tggtgttcgg cggaggcacc 300
aagctgacag tgctgggaca gcctaaggct gcccccagcg tgaccctgtt ccccccccagc 360
agcgaggagc tgcaggccaa caaggccacc ctggtgtgcc tgatcagcga cttctaccca 420
ggcgccgtga ccgtggcctg gaaggccgac agcagccccg tgaaggccgg cgtggagacc 480
accaccccca gcaagcagag caacaacaag tacgccgcca gcagctacct gagcctgacc 540
cccgagcagt ggaagagcca caggtcctac agctgccagg tgacccacga gggcagcacc 600
gtggaaaaga ccgtggcccc aaccgagtgc agc                                633
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<210> 201
<211> 707
<212> PRT
<213> Homo Sapien

<400> 201

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1               5                  10                  15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
            20                  25                  30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45
```

Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
100 105 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
130 135 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
195 200 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
210 215 220
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225 230 235 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
245 250 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
450 455 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465 470 475 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
485 490 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
500 505 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
515 520 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
530 535 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly

545 550 555 560
Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met
660 665 670
Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 202
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 202
caggtgcagc tggtggaatc aggcggagga ctggtccagc ctggcggatc acttagactg 60
agctgtgccg ctagtggctt cacctttagc gactatgtga ttaactgggt ccgacaggcc 120
cctggcaagg gactggaatg ggtgtcaggc attagttgga gcggcgtgaa cactcactac 180
gccgatagcg tgaagggccg gttcactatt agccgggata actctaagaa caccctgtac 240
ctgcagatga atagcctgag agccgaggac accgccgtct actactgcgc tagactgggc 300
gctaccgcta acaacatccg ctataagttc atggacgtgt ggggccaggg caccctggtc 360
acagtgtctt cagctagcac taagggcccc tcagtgttcc ccctggcccc tagctctaag 420
tctactagcg gtggcaccgc cgctctgggc tgcctggtca aggactactt ccccgagccc 480
gtgaccgtgt cttggaatag cggcgctctg actagcggag tgcacacctt ccccgccgtg 540
ctgcagtcta gcggcctgta tagcctgtct agcgtcgtga ccgtgcctag ctctagcctg 600
ggcactcaga cctatatctg taacgtgaac cacaagccta gtaacactaa ggtggacaag 660
cgggtggaac ctaagtcttg cgataagact cacacctgtc ccccctgccc tgccccagaa 720
gctgctggcg gacctagcgt gttcctgttc ccacctaagc ctaaagacac cctgatgatt 780
agtaggaccc ccgaagtgac ctgcgtggtg gtggacgtca gccacgagga ccctgaagtg 840
aagttcaatt ggtatgtgga cggcgtggaa gtgcacaacg ctaagactaa gcctagagag 900
gaacagtata actccaccta tagggtggtg tcagtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aagagtataa gtgtaaagtc tctaacaagg ccctgcctgc ccctatcgaa 1020
aagactatct ctaaggctaa gggccagcct agagaacccc aggtctacac cctgcccccc 1080
agtagagaag agatgactaa gaatcaggtg tccctgacct gtctggtcaa gggcttctac 1140
cctagcgata tcgccgtgga gtgggagtct aacggccagc ccgagaacaa ctataagact 1200
acccccccctg tgctggatag cgacggctct ttcttcctgt actctaaact gaccgtggac 1260
aagtctaggt ggcagcaggg caacgtgttc agctgtagcg tgatgcacga ggccctgcac 1320
aatcactaca ctcagaagtc actgagcctg agtcccggca agggcggctc aggcggtagc 1380
gatatcgtgc tgactcagtc acccgctacc ctgagtctga gccctggcga gcgggctaca 1440
ctgagctgta gagctagtca gtttatcggc tcacgctacc tggcctggta tcagcagaag 1500
cccggccagg cccctagact gctgatctac ggcgctagta atagagctac cggcgtgccc 1560
gctaggttta gcggctcagg atcaggcacc gactttaccc tgactattag tagcctggaa 1620
cccgaggact tcgctaccta ctactgtcag cagtactacg actaccctca gaccttcggc 1680
cagggaacta aggtcgagat taagggcggt ggcggtagcg gcggaggcgg atcaggtggt 1740
ggtggtagtg gcggcggagg tagtcaggtc cagctgaaag agtcaggccc tgccctggtc 1800
aagcctactc agaccctgac cctgacctgc acttttagcg gctttagcct gagtaataga 1860
ggcggcggag tgggctggat tagacagcct ccaggcaaag ccctggagtg gctggcctgg 1920
atcgactggg acgacgataa gtcctactcc actagcctga aaactaggct gacaatcagc 1980
aaggacacta gtaaaaacca ggtggtgctg actatgacta atatggaccc cgtggacacc 2040

gctacctatt attgcgctag aatgcacctc ccactggtgt tcgatagctg gggtcaggga 2100
actctggtca cagtcagtag c 2121

<210> 203
<211> 105
<212> PRT
<213> Homo Sapien

<400> 203
Ser Tyr Glu Leu Thr Gln Pro Leu Ser Val Ser Val Ala Leu Gly Gln
1 5 10 15
Thr Ala Arg Ile Thr Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Arg Ala Gln Ala Gly Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 204
<211> 315
<212> DNA
<213> Homo Sapien

<400> 204
agctacgagc tgactcagcc cctgagcgtg tcagtggctc tgggccagac cgctagaatc 60
acctgtagcg gcgatagcct gagaaacaag gtctactggt atcagcagaa gcccggccag 120
gcccctgtgc tggtcatcta taagaacaat aggcctagcg gcatccccga gcggtttagc 180
ggctctaata gcggcaacac cgctaccctg actattagta gggctcaggc cggcgacgag 240
gccgactact actgtcagtc ctacgacggc cagaagtcac tggtctttgg cggcggaact 300
aagctgaccg tgctg 315

<210> 205
<211> 211
<212> PRT
<213> Homo Sapien

<400> 205
Ser Tyr Glu Leu Thr Gln Pro Leu Ser Val Ser Val Ala Leu Gly Gln
1 5 10 15
Thr Ala Arg Ile Thr Cys Ser Gly Asp Ser Leu Arg Asn Lys Val Tyr
20 25 30
Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Lys
35 40 45
Asn Asn Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Asn Ser
50 55 60
Gly Asn Thr Ala Thr Leu Thr Ile Ser Arg Ala Gln Ala Gly Asp Glu
65 70 75 80
Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Gln Lys Ser Leu Val Phe
85 90 95
Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro
100 105 110
Ser Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln Ala Asn Lys
115 120 125
Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ala Val Thr
130 135 140
Val Ala Trp Lys Ala Asp Ser Ser Pro Val Lys Ala Gly Val Glu Thr

145 150 155 160
Thr Thr Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala Ser Ser Tyr
165 170 175
Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser Tyr Ser Cys
180 185 190
Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val Ala Pro Thr
195 200 205
Glu Cys Ser
210

<210> 206
<211> 633
<212> DNA
<213> Homo Sapien

<400> 206
agctacgagc tgactcagcc cctgagcgtg tcagtggctc tgggccagac cgctagaatc 60
acctgtagcg gcgatagcct gagaaacaag gtctactggt atcagcagaa gcccggccag 120
gcccctgtgc tggtcatcta taagaacaat aggcctagcg gcatccccga gcggtttagc 180
ggctctaata gcggcaacac cgctaccctg actattagta gggctcaggc cggcgacgag 240
gccgactact actgtcagtc ctacgacggc cagaagtcac tggtctttgg cggcggaact 300
aagctgaccg tgctgggaca gcctaaggct gcccccagcg tgaccctgtt ccccccccagc 360
agcgaggagc tgcaggccaa caaggccacc ctggtgtgcc tgatcagcga cttctaccca 420
ggcgccgtga ccgtggcctg gaaggccgac agcagccccg tgaaggccgg cgtggagacc 480
accaccccca gcaagcagag caacaacaag tacgccgcca gcagctacct gagcctgacc 540
cccgagcagt ggaagagcca caggtcctac agctgccagg tgacccacga gggcagcacc 600
gtggaaaaga ccgtggcccc aaccgagtgc agc 633

<210> 207
<211> 707
<212> PRT
<213> Homo Sapien

<400> 207
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr
20 25 30
Val Ile Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Gly Ile Ser Trp Ser Gly Val Asn Thr His Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Leu Gly Ala Thr Ala Asn Asn Ile Arg Tyr Lys Phe Met Asp
100 105 110
Val Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
130 135 140
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
145 150 155 160
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
165 170 175
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
180 185 190
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
195 200 205
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro
210 215 220

Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
225 230 235 240
Ala Ala Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
245 250 255
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
260 265 270
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
275 280 285
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
290 295 300
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
305 310 315 320
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
325 330 335
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
340 345 350
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
355 360 365
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
370 375 380
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
385 390 395 400
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
405 410 415
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
420 425 430
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
435 440 445
Ser Leu Ser Pro Gly Lys Gly Gly Ser Gly Gly Ser Asp Ile Val Leu
450 455 460
Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr
465 470 475 480
Leu Ser Cys Arg Ala Ser Gln Phe Ile Gly Ser Arg Tyr Leu Ala Trp
485 490 495
Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ala
500 505 510
Ser Asn Arg Ala Thr Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser
515 520 525
Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro Glu Asp Phe
530 535 540
Ala Thr Tyr Tyr Cys Gln Gln Tyr Tyr Asp Tyr Pro Gln Thr Phe Gly
545 550 555 560
Gln Gly Thr Lys Val Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
565 570 575
Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu
580 585 590
Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln Thr Leu Thr Leu
595 600 605
Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Asn Arg Gly Gly Gly Val
610 615 620
Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Trp
625 630 635 640
Ile Asp Trp Asp Asp Asp Lys Ser Tyr Ser Thr Ser Leu Lys Thr Arg
645 650 655
Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val Val Leu Thr Met
660 665 670
Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr Cys Ala Arg Met
675 680 685
His Leu Pro Leu Val Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr
690 695 700
Val Ser Ser
705

<210> 208
<211> 2121
<212> DNA
<213> Homo Sapien

<400> 208
gaggtgcagc tgctggaatc aggcggagga ctggtgcagc ctggcggatc actgagactg 60
agctgtgccg ctagtggctt cacctttagc gactatgtga ttaactgggt ccgacaggcc 120
cctggcaagg gactggaatg ggtgtcaggc attagttgga gcggcgtgaa cactcactac 180
gccgatagcg tgaagggccg gttcactatt agccgggata actctaagaa caccctgtac 240
ctgcagatga atagcctgag agccgaggac accgccgtct actactgcgc tagactgggc 300
gctaccgcta acaacatccg ctataagttc atggacgtgt ggggccaggg caccctggtc 360
acagtgtctt cagctagcac taagggcccc tcagtgttcc ccctggcccc tagctctaag 420
tctactagcg gtggcaccgc cgctctgggc tgcctggtca aggactactt ccccgagccc 480
gtgaccgtgt cttggaatag cggcgctctg actagcggag tgcacacctt ccccgccgtg 540
ctgcagtcta gcggcctgta tagcctgtct agcgtcgtga ccgtgcctag ctctagcctg 600
ggcactcaga cctatatctg taacgtgaac cacaagccta gtaacactaa ggtggacaag 660
cgggtggaac ctaagtcttg cgataagact cacacctgtc ccccctgccc tgccccagaa 720
gctgctggcg gacctagcgt gttcctgttc ccacctaagc ctaaagacac cctgatgatt 780
agtaggaccc ccgaagtgac ctgcgtggtg gtggacgtca gccacgagga ccctgaagtg 840
aagttcaatt ggtatgtgga cggcgtggaa gtgcacaacg ctaagactaa gcctagagag 900
gaacagtata actccaccta tagggtggtg tcagtgctga ccgtgctgca ccaggactgg 960
ctgaacggca aagagtataa gtgtaaagtc tctaacaagg ccctgcctgc ccctatcgaa 1020
aagactatct ctaaggctaa gggccagcct agagaacccc aggtctacac cctgcccccc 1080
agtagagaag agatgactaa gaatcaggtg tccctgacct gtctggtcaa gggcttctac 1140
cctagcgata tcgccgtgga gtgggagtct aacggccagc ccgagaacaa ctataagact 1200
acccccccctg tgctggatag cgacggctct ttcttcctgt actctaaact gaccgtggac 1260
aagtctaggt ggcagcaggg caacgtgttc agctgtagcg tgatgcacga ggccctgcac 1320
aatcactaca ctcagaagtc actgagcctg agtcccggca agggcggctc aggcggtagc 1380
gatatcgtgc tgactcagtc acccgctacc ctgagtctga gccctggcga gcgggctaca 1440
ctgagctgta gagctagtca gtttatcggc tcacgctacc tggcctggta tcagcagaag 1500
cccggccagg cccctagact gctgatctac ggcgctagta atagagctac cggcgtgccc 1560
gctaggttta gcggctcagg atcaggcacc gactttaccc tgactattag tagcctggaa 1620
cccgaggact tcgctaccta ctactgtcag cagtactacg actaccctca gaccttcggc 1680
cagggaacta aggtcgagat taagggcggt ggcggtagcg gcggaggcgg atcaggtggt 1740
ggtggtagtg gcggcggagg tagtcaggtc cagctgaaag agtcaggccc tgccctggtc 1800
aagcctactc agaccctgac cctgacctgc acttttagcg gctttagcct gagtaataga 1860
ggcggcggag tgggctggat tagacagcct ccaggcaaag ccctggagtg gctggcctgg 1920
atcgactggg acgacgataa gtcctactcc actagcctga aaactaggct gacaatcagc 1980
aaggacacta gtaaaaacca ggtggtgctg actatgacta atatggaccc cgtggacacc 2040
gctacctatt attgcgctag aatgcacctc ccactggtgt tcgatagctg gggtcaggga 2100
actctggtca cagtcagtag c 2121