SEQUENCE LISTING

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<150> 62/454,476
<151> 2017-02-03

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<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 1
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1 5 10

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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 2
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 3
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<220>
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<400> 3
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 4
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<400> 4
Ser Tyr Ala Met Ser
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<220>
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peptide"

<400> 5
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 6
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<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 6
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 7
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<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 7
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 8
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 8
Ser Ser Gly Gly Ser Phe
1 5

<210> 9
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 9
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 10

<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 10
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 11
Ile Ser Ser Gly Gly Ser Phe Thr
1 5

<210> 12
<211> 14
<212> PRT
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 12
Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 13
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 13
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
            100   105   110

Gln Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 14
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 14
gaagtgcagc tggtggaatc tggcggcgga ctggtcaagc ctggcggctc cctgagactg   60

tcttgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggcc   120

cctggcaagg gactggagtg ggtggccacc atctcctccg gcggcagctt cacctactac   180

cccgactccg tgaagggccg gttcaccatc tcccgggaca acgccaagaa ctccctgtac   240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc   300

tccaccgtcg tgggcaccga tttcgatgtg tggggccagg gcacaaccgt gaccgtgtcc 360

tcc 363

<210> 15
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 15
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

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

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

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Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365
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Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450
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<210> 16
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 16
gaagtgcagc tggtggaatc tggcggcgga ctggtcaagc ctggcggctc cctgagactg 60

tcttgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggcc 120

cctggcaagg gactggagtg ggtggccacc atctcctccg gcggcagctt cacctactac 180

cccgactccg tgaagggccg gttcaccatc tcccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc 300

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tccgcctcca ccaagggacc ctccgtgttc cctctggccc cttccagcaa gtccacctct 420

ggcggcaccg ccgctctggg ctgcctggtc aaggactact tcccctgccc tgtgacagtg 480

tcctggaact ccggcgctct gacctccggc gtgcacacct tccctgccgt gctgcagtcc 540

tccggcctgt actccctgtc ctccgtcgtg accgtgcctt cctccagcct gggcacccag 600

acctacatct gcaacgtgaa ccacaagccc tccaacacca aagtggacaa gcgggtggaa 660

cccaagtcct gcgacaagac ccacacctgt cctccctgcc ctgcccctga gctgctggga 720

ggcccttccg tgttcctgtt ccctccaaag cccaaggaca ccctgatgat ctcccggacc 780

cctgaagtga cctgcgtggt ggtggccgtg tcccacgagg atcccgaagt gaagttcaat 840

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aactccacct accgggtggt gtccgtgctg accgtgctgc accaggactg gctgaacggc 960

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tccaaggcca agggccagcc cagagagccc caagtgtaca cactgcctcc cagccgggaa 1080

gagatgacca agaaccaagt gtccctgacc tgcctcgtga agggcttcta cccctgcgat 1140

atcgccgtgg agtgggagtc caacggccag cccgagaaca actacaagac cacccctccc 1200

gtgctggaca gcgacggctc attcttcctg tactccaagc tgaccgtgga caagtcccgg 1260

tggcagcagg gcaacgtgtt ctcctgctcc gtgatgcacg aggccctgca caaccactac 1320

acccagaagt ccctgtccct gagccccggc aag 1353

<210> 17
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 17
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 18

Ala Thr Ser Ser Leu Asp Ser
1   5

<210> 19
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 19
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1   5

<210> 20
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 20
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1   5   10

<210> 21
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 21
Ala Thr Ser Ser Leu Asp Ser
1   5

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 22
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 23
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 23
Ser Gln Asp Ile Gly Ser Ser
1 5

<210> 24
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 24
Ala Thr Ser
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<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 25
Tyr Ala Ser Ser Pro Pro
1 5

<210> 26
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
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<223> /note="Description of Artificial Sequence: Synthetic
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<400> 26
Gln Asp Ile Gly Ser Ser
1 5

<210> 27
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 27
Ala Thr Ser
1

<210> 28
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 28
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 29
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

polypeptide"

<400> 29
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 30
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 30
gacatccaga tgacccagag cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctctg gctccagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccctcccac cttcggcgga 300

ggcaccaagc tggaaatcaa g 321

<210> 31
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 31
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 32
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 32
gacatccaga tgacccagag cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctctg gctccagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccctcccac cttcggcgga 300

ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttcccccc 360

agcgacgagc agctgaagag cggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420

ccccgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caacagccag 480

gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540

ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 33
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 33
Gly Phe Thr Phe Ser Thr Tyr Ala Met Ser
1 5 10

<210> 34
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 34
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 35
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 35
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 36
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 36

Thr Tyr Ala Met Ser
1 5

<210> 37
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 37
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 38
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 38
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 39
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 39
Gly Phe Thr Phe Ser Thr Tyr
1 5

<210> 40

<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
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<400> 40
Ser Asp Ala Gly Ser Tyr
1 5

<210> 41
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 41
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 42
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 42
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 43
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 43
Ile Ser Asp Ala Gly Ser Tyr Ser
1   5

<210> 44
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 44
Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1   5   10   15

<210> 45
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 45
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 46
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 46
gaagtgcagc tggtggaatc tggcggcgga ctggtcaagc ctggcggctc cctgagactg 60

tcttgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt ccgacaggcc 120

cctggaaagg gcctggagtg ggtggccacc atctccgacg ccggctccta ctcctactac 180

cccgacaacg tgaagggccg gttcaccatc tcccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgcgc cagacggggc 300

tccagatacg aagagtacta cgtgatggac tactggggcc agggcacaac cgtgaccgtg 360

tcctcc 366

<210> 47
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 47
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
        115                 120                 125

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

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

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
                165                 170                 175

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
    210                 215                 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
                245                 250                 255
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Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser
            260                 265                 270

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro
                325                 330                 335

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
        355                 360                 365

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val
    370                 375                 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
                405                 410                 415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445

Ser Pro Gly Lys
    450
```

<210> 48
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 48
gaagtgcagc tggtggaatc tggcggcgga ctggtcaagc ctggcggctc cctgagactg 60

tcttgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt ccgacaggcc 120

cctggaaagg gcctggagtg ggtggccacc atctccgacg ccggctccta ctcctactac 180

cccgacaacg tgaagggccg gttcaccatc tcccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgcgc cagacggggc 300

tccagatacg aagagtacta cgtgatggac tactggggcc agggcacaac cgtgaccgtg 360

tcctccgcct ccaccaaggg accctccgtg ttccctctgg ccccttccag caagtccacc 420

tctggcggca ccgccgctct gggctgcctg gtcaaggact acttccccctg ccctgtgaca 480

gtgtcctgga actccggcgc tctgacctcc ggcgtgcaca ccttccctgc cgtgctgcag 540

tcctccggcc tgtactccct gtcctccgtc gtgaccgtgc cttcctccag cctgggcacc 600

cagacctaca tctgcaacgt gaaccacaag ccctccaaca ccaaagtgga caagcgggtg 660

gaacccaagt cctgcgacaa gacccacacc tgtcctccct gccctgcccc tgagctgctg 720

ggaggccctt ccgtgttcct gttccctcca aagcccaagg acaccctgat gatctcccgg 780

acccctgaag tgacctgcgt ggtggtggcc gtgtcccacg aggatcccga agtgaagttc 840

aattggtacg tggacggcgt ggaagtgcac aatgccaaga ccaagcccag agaggaacag 900

tacaactcca cctaccgggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaagagt acaagtgcaa agtgtccaac aaggccctgg ccgctcccat cgaaaagacc 1020

atctccaagg ccaagggcca gcccagagag ccccaagtgt acacactgcc tcccagccgg 1080

gaagagatga ccaagaacca agtgtccctg acctgcctcg tgaagggctt ctacccctgc 1140

gatatcgccg tggagtggga gtccaacggc cagcccgaga acaactacaa gaccacccct 1200

cccgtgctgg actccgacgg ctcattcttc ctgtactcca agctgaccgt ggacaagtcc 1260

cggtggcagc agggcaacgt gttctcctgc tccgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agtccctgtc cctgagcccc ggcaag 1356

<210> 49
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 49
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 50
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 50
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 51
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 51
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 52
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 52
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 53
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 53
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 54
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 54
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 55
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 55
Ser Gln Ser Ile Ser Asn Asn
1 5

<210> 56
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 56
Tyr Ala Ser
1

<210> 57
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 57
Ser Ser Ser Trp Leu
1 5

<210> 58
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 58
Gln Ser Ile Ser Asn Asn
1 5

<210> 59
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 59
Tyr Ala Ser
1

<210> 60
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 60
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 61
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 61
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr

85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 62
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 62
gagatcgtgc tgacacagtc ccctgccacc ctgtctgtgt ctcccggcga gagagtgacc 60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc 120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc 180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc 240

gaggacttcg gcgtgtactt ctgccagcag tcctcctcct ggctgacctt cggccagggc 300

accaagctgg aaatcaag 318

<210> 63
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 63
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

```
Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

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

Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr
                85                  90                  95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210
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<210> 64
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 64
gagatcgtgc tgacacagtc ccctgccacc ctgtctgtgt ctcccggcga gagagtgacc 60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc 120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc 180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc 240

gaggacttcg gcgtgtactt ctgccagcag tcctcctcct ggctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 65
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 65
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser Trp His
1 5 10

<210> 66
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 66
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 67
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 67
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 68
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 68
Ser Gly Tyr Ser Trp His
1 5

<210> 69
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 69
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 70
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 70
Gly Gly Val Gln Ala Phe Ala Tyr
1   5

<210> 71
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 71
Gly Tyr Ser Ile Thr Ser Gly Tyr
1   5

<210> 72
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 72
His Ser Ser Gly Ser
1   5

<210> 73
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 73
Gly Gly Val Gln Ala Phe Ala Tyr
1   5

<210> 74
<211> 9
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 74
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser
1 5

<210> 75
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 75
Ile His Ser Ser Gly Ser Thr
1 5

<210> 76
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 76
Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr
1 5 10

<210> 77
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 77
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln

1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 78
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 78
gacgtgcagc tgcaggaatc tggccctggc ctggtcaagc cctcccagac cctgtccctg 60

acctgcaccg tgtccggcta ctctatcacc tccggctaca gctggcactg gatccggcag 120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac 180

aaccccagcc tgaagtcccg gatcaccatc tcccgggaca cctccaagaa ccagttctcc 240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc 300

gtgcaggcct tcgcttattg gggccaggga accctggtca ccgtgtcctc c 351

<210> 79
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 79
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
165 170 175

```
Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Ala Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365

Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380
```

```
Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400


Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415


Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430


His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
```

<210> 80
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 80

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gacgtgcagc tgcaggaatc tggccctggc ctggtcaagc cctcccagac cctgtccctg       60

acctgcaccg tgtccggcta ctctatcacc tccggctaca gctggcactg gatccggcag      120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac      180

aaccccagcc tgaagtcccg gatcaccatc tcccgggaca cctccaagaa ccagttctcc      240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc      300

gtgcaggcct tcgcttattg gggccaggga accctggtca ccgtgtcctc cgccagcacc      360

aagggaccct ccgtgttccc tctggccccc tccagcaagt ccacctctgg cggcaccgcc      420

gctctgggct gcctcgtgaa ggactacttc ccctgccccg tgaccgtgtc ctggaactcc      480

ggcgctctga cctccggcgt gcacaccttc cctgccgtgc tgcagtcctc cggcctgtac      540

tccctgtcca gcgtcgtgac cgtgccctcc agctctctgg gcacccagac ctacatctgc      600

aacgtgaacc acaagccctc caacaccaaa gtggacaagc gggtggaacc caagtcctgc      660

gacaagaccc acacctgtcc tccctgccct gcccctgagc tgctgggagg cccttccgtg      720

ttcctgttcc ctccaaagcc caaggacacc ctgatgatct cccggacccc tgaagtgacc      780

tgcgtggtgg tggccgtgtc ccacgaggat cccgaagtga agttcaattg gtacgtggac      840
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ggcgtggaag tgcacaacgc caagaccaag cccagagagg aacagtacaa ctccacctac 900

cgggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agagtacaag 960

tgcaaagtgt ccaacaaggc cctggccgct cccatcgaaa agaccatctc caaggccaag 1020

ggccagccca gagagcccca agtgtacaca ctgcctccca gccgggaaga gatgaccaag 1080

aatcaagtgt ccctgacctg tctggtcaag ggcttctacc cctgcgatat cgccgtggag 1140

tgggagtcca acggccagcc cgagaacaac tacaagacca cccctcccgt gctggactcc 1200

gacggctcat tcttcctgta ctccaagctg accgtggaca agtcccggtg gcagcagggc 1260

aacgtgttct cctgctccgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctgt cccctggcaa g 1341

<210> 81
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 81
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 82
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 82
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 83
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 83
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 84
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 84
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 85
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 85
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 86
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 86
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 87
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 87
Ser Ser Ser Val Ile Tyr
1 5

<210> 88
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 88
Asp Thr Ser
1

<210> 89
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 89
Trp Ser Ser Asn Pro Leu
1 5

<210> 90
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 90
Ser Ser Val Ile Tyr
1 5

<210> 91
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 91
Asp Thr Ser
1

<210> 92
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 92
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 93
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 93
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Pro Gly
1 5 10 15

Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met

20 25 30

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

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 94
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 94
gagatcgtgc tgacacagtc ccctgccacc ctgtccgcct ctccaggcga gcgcgtgaca 60

atgtcctgct ccgcctcctc ctccgtgatc tacatgcact ggtatcagca gaagcccggc 120

caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga 180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag 240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ctctgacctt cggccagggc 300

accaagctgg aaatcaag 318

<210> 95
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 95
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Pro Gly
1 5 10 15

Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

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

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
195 200 205

Asn Arg Gly Glu Cys
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<210> 96
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

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caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga 180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag 240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ctctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagcgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc   639

<210> 97
<211> 378
<212> PRT
<213> Homo sapiens

<400> 97
Met Asp Leu Gly Lys Pro Met Lys Ser Val Leu Val Val Ala Leu Leu
1   5   10   15

Val Ile Phe Gln Val Cys Leu Cys Gln Asp Glu Val Thr Asp Asp Tyr
            20   25   30

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Ile Gly Asp Asn Thr Thr Val Asp Tyr Thr Leu Phe Glu Ser Leu Cys
        35                  40                  45

Ser Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Ile Met
    50                  55                  60

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

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
                85                  90                  95

Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Leu Thr Leu Pro
            100                 105                 110

Phe Trp Ala Tyr Ser Ala Ala Lys Ser Trp Val Phe Gly Val His Phe
        115                 120                 125

Cys Lys Leu Ile Phe Ala Ile Tyr Lys Met Ser Phe Phe Ser Gly Met
    130                 135                 140

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

Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165                 170                 175

Leu Ser Cys Val Gly Ile Trp Ile Leu Ala Thr Val Leu Ser Ile Pro
            180                 185                 190

Glu Leu Leu Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met
        195                 200                 205

Arg Cys Ser Leu Ile Thr Glu His Val Glu Ala Phe Ile Thr Ile Gln
    210                 215                 220

Val Ala Gln Met Val Ile Gly Phe Leu Val Pro Leu Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Val Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255
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Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270

Ile Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285

Ala Asn Phe Asn Ile Thr Ser Ser Thr Cys Glu Leu Ser Lys Gln Leu
    290                 295                 300

Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Cys Val Arg Cys Cys
305                 310                 315                 320

Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Asn Asp
                325                 330                 335

Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Gln Leu
            340                 345                 350

Arg Gln Trp Ser Ser Cys Arg His Ile Arg Arg Ser Ser Met Ser Val
        355                 360                 365

Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
    370                 375
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<210> 98
<211> 1134
<212> DNA
<213> Homo sapiens

<400> 98
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tacactttgt tcgagtcttt gtgctccaag aaggacgtgc ggaactttaa agcctggttc 180

ctccctatca tgtactccat catttgtttc gtgggcctac tgggcaatgg gctggtcgtg 240

ttgacctata tctatttcaa gaggctcaag accatgaccg atacctacct gctcaacctg 300

gcggtggcag acatcctctt cctcctgacc cttcccttct gggcctacag cgcggccaag 360

tcctgggtct tcggtgtcca cttttgcaag ctcatctttg ccatctacaa gatgagcttc 420

ttcagtggca tgctcctact tctttgcatc agcattgacc gctacgtggc catcgtccag 480

gctgtctcag ctcaccgcca ccgtgcccgc gtccttctca tcagcaagct gtcctgtgtg 540

ggcatctgga tactagccac agtgctctcc atcccagagc tcctgtacag tgacctccag 600

aggagcagca gtgagcaagc gatgcgatgc tctctcatca cagagcatgt ggaggccttt 660

atcaccatcc aggtggccca gatggtgatc ggctttctgg tccccctgct ggccatgagc 720

ttctgttacc ttgtcatcat ccgcaccctg ctccaggcac gcaactttga gcgcaacaag 780

gccatcaagg tgatcatcgc tgtggtcgtg gtcttcatag tcttccagct gccctacaat 840

ggggtggtcc tggcccagac ggtggccaac ttcaacatca ccagtagcac ctgtgagctc 900

agtaagcaac tcaacatcgc ctacgacgtc acctacagcc tggcctgcgt ccgctgctgc 960

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atccggcgct cctccatgag tgtggaggcc gagaccacca ccaccttctc ccca 1134

<210> 99
<211> 378
<212> PRT
<213> Macaca fascicularis

<400> 99
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Val Ile Phe Gln Val Cys Leu Cys Gln Asp Glu Val Thr Asp Asp Tyr
20 25 30

Ile Gly Asp Asn Thr Thr Val Asp Tyr Thr Leu Phe Glu Ser Leu Cys
35 40 45

Ser Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Ile Met
50 55 60

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

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
85 90 95

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Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Leu Thr Leu Pro
            100                 105                 110

Phe Trp Ala Tyr Ser Ala Ala Lys Ser Trp Val Phe Gly Val His Phe
        115                 120                 125

Cys Lys Leu Ile Phe Ala Ile Tyr Lys Met Ser Phe Phe Ser Gly Met
    130                 135                 140

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

Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165                 170                 175

Leu Ser Cys Val Gly Ile Trp Ile Leu Ala Thr Val Leu Ser Ile Pro
            180                 185                 190

Glu Leu Leu Tyr Ser Gly Leu Gln Arg Ser Ser Ser Glu Gln Ala Met
        195                 200                 205

Arg Cys Ser Leu Ile Thr Glu His Val Glu Ala Phe Ile Thr Ile Gln
    210                 215                 220

Val Ala Gln Met Val Ile Gly Phe Leu Val Pro Leu Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Val Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255

Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270

Ile Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285

Ala Asn Phe Asn Ile Thr Ser Ser Thr Cys Glu Leu Ser Lys Gln Leu
    290                 295                 300

Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Cys Val Arg Cys Cys
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305 310 315 320

Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Asn Asp
325 330 335

Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Gln Leu
340 345 350

Arg Gln Trp Ser Ser Cys Arg His Ile Arg Arg Ser Ser Met Ser Val
355 360 365

Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
370 375

<210> 100
<211> 1134
<212> DNA
<213> Macaca fascicularis

<400> 100
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gtatgcctgt gtcaagatga ggtcacggac gattacatcg gagacaacac cacagtggac 120

tacactttgt tcgagtcttt gtgctccaag aaggacgtgc ggaactttaa agcctggttc 180

ctccctatca tgtactccat catttgtttc gtgggcctac tgggcaatgg gctggtcgtg 240

ttgacctata tctatttcaa gaggctcaag accatgaccg atacctacct gctcaacctg 300

gcggtggcag acatcctctt cctcctgacc cttcccttct gggcctacag cgcggccaag 360

tcctgggtct tcggtgtcca cttttgcaag ctcatctttg ccatctacaa gatgagcttc 420

ttcagtggca tgctcctact tctttgcatc agcattgacc gctacgtggc catcgtccag 480

gctgtctcag ctcaccgcca ccgtgcccgc gtccttctca tcagcaagct gtcctgtgtg 540

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ttctgttacc ttgtcatcat ccgcaccctg ctccaggcac gcaactttga gcgcaacaag 780

gccatcaagg tgatcatcgc tgtggtcgtg gtcttcatag tcttccagct gccctacaat 840

ggggtggtcc tggcccagac ggtggccaac ttcaacatca ccagtagcac ctgtgagctc 900

agtaagcaac tcaacatcgc ctacgacgtc acctacagcc tggcctgcgt ccgctgctgc 960

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<210> 101
<211> 378
<212> PRT
<213> Mus sp.

<400> 101
Met Asp Pro Gly Lys Pro Arg Lys Asn Val Leu Val Val Ala Leu Leu
1 5 10 15

Val Ile Phe Gln Val Cys Phe Cys Gln Asp Glu Val Thr Asp Asp Tyr
20 25 30

Ile Gly Glu Asn Thr Thr Val Asp Tyr Thr Leu Tyr Glu Ser Val Cys
35 40 45

Phe Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Leu Met
50 55 60

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

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
85 90 95

Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Leu Ile Leu Pro
100 105 110

Phe Trp Ala Tyr Ser Glu Ala Lys Ser Trp Ile Phe Gly Val Tyr Leu
115 120 125

Cys Lys Gly Ile Phe Gly Ile Tyr Lys Leu Ser Phe Phe Ser Gly Met
130 135 140

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

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Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165                 170                 175

Leu Ser Cys Val Gly Ile Trp Met Leu Ala Leu Phe Leu Ser Ile Pro
            180                 185                 190

Glu Leu Leu Tyr Ser Gly Leu Gln Lys Asn Ser Gly Glu Asp Thr Leu
        195                 200                 205

Arg Cys Ser Leu Val Ser Ala Gln Val Glu Ala Leu Ile Thr Ile Gln
    210                 215                 220

Val Ala Gln Met Val Phe Gly Phe Leu Val Pro Met Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Ile Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255

Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270

Ile Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285

Ala Asn Phe Asn Ile Thr Asn Ser Ser Cys Glu Thr Ser Lys Gln Leu
    290                 295                 300

Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Ser Val Arg Cys Cys
305                 310                 315                 320

Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Ser Asp
                325                 330                 335

Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Arg Leu
            340                 345                 350

Arg His Trp Ser Ser Cys Arg His Val Arg Asn Ala Ser Val Ser Met
        355                 360                 365
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Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
370 375

<210> 102
<211> 1134
<212> DNA
<213> Mus sp.

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tacaccctgt acgagtcggt gtgcttcaag aaggatgtgc ggaactttaa ggcctggttc 180

ctgcctctca tgtattctgt catctgcttc gtgggcctgc tcggcaacgg gctggtgata 240

ctgacgtaca tctatttcaa gaggctcaag accatgacgg atacctacct gctcaacctg 300

gccgtggcag acatcctttt cctcctgatt cttcccttct gggcctacag cgaagccaag 360

tcctggatct ttggcgtcta cctgtgtaag ggcatctttg gcatctataa gttaagcttc 420

ttcagcggga tgctgctgct cctatgcatc agcattgacc gctacgtagc catcgtccag 480

gccgtgtcgg ctcatcgcca ccgcgcccgc gtgcttctca tcagcaagct gtcctgtgtg 540

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aagaacagcg gcgaggacac gctgagatgc tcactggtca gtgcccaagt ggaggccttg 660

atcaccatcc aagtggccca gatggttttt gggttcctag tgcctatgct ggctatgagt 720

ttctgctacc tcattatcat ccgtaccttg ctccaggcac gcaactttga gcggaacaag 780

gccatcaagg tgatcattgc cgtggtggta gtcttcatag tcttccagct gccctacaat 840

ggggtggtcc tggctcagac ggtggccaac ttcaacatca ccaatagcag ctgcgaaacc 900

agcaagcagc tcaacattgc ctatgacgtc acctacagcc tggcctccgt ccgctgctgc 960

gtcaaccctt tcttgtatgc cttcatcggc gtcaagttcc gcagcgacct cttcaagctc 1020

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gtacggaacg cgtcggtgag catggaggcg gagaccacca caaccttctc cccg 1134

<210> 103
<211> 378
<212> PRT
<213> Rattus sp.

<400> 103
Met Asp Leu Gly Lys Pro Thr Lys Asn Val Leu Val Val Ala Leu Leu
1   5   10   15

Val Ile Phe Gln Val Cys Phe Cys Gln Asp Glu Val Thr Asp Asp Tyr
            20   25   30

Ile Gly Glu Asn Thr Thr Val Asp Tyr Thr Leu Tyr Glu Ser Val Cys
        35   40   45

Phe Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Leu Met
    50   55   60

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

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
                85   90   95

Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Met Ile Leu Pro
            100   105   110

Phe Trp Ala Tyr Ser Glu Ala Lys Ser Trp Ile Phe Gly Ala Tyr Leu
        115   120   125

Cys Lys Ser Ile Phe Gly Ile Tyr Lys Leu Ser Phe Phe Ser Gly Met
    130   135   140

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

Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165   170   175

Leu Ser Cys Ile Gly Ile Trp Thr Leu Ala Phe Phe Leu Ser Ile Pro
            180   185   190

Glu Leu Leu Tyr Ser Gly Leu Gln Lys Asn Ser Gly Glu Asp Thr Trp
        195   200   205

Arg Cys Ser Leu Val Ser Ala Gln Val Glu Ala Leu Ile Ala Ile Gln

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    210                 215                 220

Val Ala Gln Met Val Val Gly Phe Val Leu Pro Met Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Val Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255

Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270

Val Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285

Ala Asn Phe Asn Ile Thr Asn Ser Ser Cys Glu Ala Ser Lys Gln Leu
    290                 295                 300

Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Ser Val Arg Cys Cys
305                 310                 315                 320

Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Ser Asp
                325                 330                 335

Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Arg Leu
            340                 345                 350

Arg Gln Trp Ser Ser Cys Arg His Val Arg His Thr Ser Val Ser Met
        355                 360                 365

Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
    370                 375
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<210> 104
<211> 1134
<212> DNA
<213> Rattus sp.

<400> 104
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tacaccctgt atgagtcggt gtgcttcaag aaggatgtgc ggaactttaa ggcctggttc 180

ctccctctca tgtactcagt catttgcttc gtgggcctgc taggcaatgg gctggtggtg 240

ctgacataca tctatttcaa gagactgaag accatgacgg atacctacct gctcaacctg 300

gccgtggcag acatcctctt cctcatgatc cttcccttct gggcctacag cgaagccaag 360

tcctggatct ttggtgccta cctgtgtaag agcatctttg gcatctacaa gttaagcttc 420

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gccgtgtcag cccaccggca ccgcgcccgc gtgcttctca tcagcaagct gtcctgtata 540

ggcatctgga cgctggcctt tttcctttct atccctgagc tgctctacag cggcctccag 600

aagaacagcg gcgaggacac gtggagatgc tccctggtca gtgcccaagt ggaggccttg 660

atcgccatcc aagtggccca gatggttgtt gggtttgtac tgcctatgct ggctatgagt 720

ttctgctacc tggttatcat ccgcactctg ctccaggcgc gaaacttcga gcggaacaag 780

gccatcaagg tgatcatcgc tgtggtcgta gtgttcgtcg tcttccagct gccctacaat 840

ggggtggtcc tggcccagac cgtggccaat ttcaacatca ccaatagcag ctgcgaagcc 900

agcaagcagc tcaacattgc ctatgacgtc acctacagcc tggcctccgt ccgctgctgt 960

gtcaaccctt tcttgtatgc cttcatcggc gtcaagttcc gcagcgacct cttcaagctc 1020

ttcaaggact tgggctgcct cagccaggaa cggctccggc agtggtcttc ctgccgccat 1080

gtacggcaca cgtccgtgag catggaggcg gagactacca ccaccttctc cccg 1134

<210> 105
<211> 378
<212> PRT
<213> Homo sapiens

<400> 105
Met Asp Leu Gly Lys Pro Met Lys Ser Val Leu Val Val Ala Leu Leu
1 5 10 15

Val Ile Phe Gln Val Cys Leu Cys Gln Asp Glu Val Thr Asp Asp Tyr
20 25 30

Ile Gly Asp Asn Thr Thr Val Asp Tyr Thr Leu Phe Glu Ser Leu Cys
35 40 45

Ser Lys Lys Asp Val Arg Asn Phe Lys Ala Trp Phe Leu Pro Ile Met
50 55 60

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

Leu Thr Tyr Ile Tyr Phe Lys Arg Leu Lys Thr Met Thr Asp Thr Tyr
                85                  90                  95

Leu Leu Asn Leu Ala Val Ala Asp Ile Leu Phe Leu Leu Thr Leu Pro
            100                 105                 110

Phe Trp Ala Tyr Ser Ala Ala Lys Ser Trp Val Phe Gly Val His Phe
        115                 120                 125

Cys Lys Leu Ile Phe Ala Ile Tyr Lys Met Ser Phe Phe Ser Gly Met
    130                 135                 140

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

Ala Val Ser Ala His Arg His Arg Ala Arg Val Leu Leu Ile Ser Lys
                165                 170                 175

Leu Ser Cys Val Gly Ile Trp Ile Leu Ala Thr Val Leu Ser Ile Pro
            180                 185                 190

Glu Leu Leu Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met
        195                 200                 205

Arg Cys Ser Leu Ile Thr Glu His Val Glu Ala Phe Ile Thr Ile Gln
    210                 215                 220

Val Ala Gln Met Val Ile Gly Phe Leu Val Pro Leu Leu Ala Met Ser
225                 230                 235                 240

Phe Cys Tyr Leu Val Ile Ile Arg Thr Leu Leu Gln Ala Arg Asn Phe
                245                 250                 255

Glu Arg Asn Lys Ala Ile Lys Val Ile Ile Ala Val Val Val Val Phe
            260                 265                 270
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Ile Val Phe Gln Leu Pro Tyr Asn Gly Val Val Leu Ala Gln Thr Val
        275                 280                 285


Ala Asn Phe Asn Ile Thr Ser Ser Thr Cys Glu Leu Ser Lys Gln Leu
    290                 295                 300


Asn Ile Ala Tyr Asp Val Thr Tyr Ser Leu Ala Cys Val Arg Cys Cys
305                 310                 315                 320


Val Asn Pro Phe Leu Tyr Ala Phe Ile Gly Val Lys Phe Arg Asn Asp
                325                 330                 335


Leu Phe Lys Leu Phe Lys Asp Leu Gly Cys Leu Ser Gln Glu Gln Leu
            340                 345                 350


Arg Gln Trp Ser Ser Cys Arg His Ile Arg Arg Ser Ser Met Ser Val
        355                 360                 365


Glu Ala Glu Thr Thr Thr Thr Phe Ser Pro
    370                 375


<210> 106
<211> 30
<212> PRT
<213> Homo sapiens

<400> 106
Gln Asp Glu Val Thr Asp Asp Tyr Ile Gly Asp Asn Thr Thr Val Asp
1               5                   10                  15


Tyr Thr Leu Phe Glu Ser Leu Cys Ser Lys Lys Asp Val Arg
            20                  25                  30


<210> 107
<211> 8
<212> PRT
<213> Homo sapiens

<400> 107
Lys Ser Trp Val Phe Gly Val His
1               5


<210> 108
<211> 19
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<212> PRT
<213> Homo sapiens

<400> 108
Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met Arg Cys Ser
1   5   10   15

Leu Ile Thr

<210> 109
<211> 7
<212> PRT
<213> Homo sapiens

<400> 109
Phe Asn Ile Thr Ser Ser Thr
1   5

<210> 110
<211> 19
<212> PRT
<213> Homo sapiens

<400> 110
Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met Arg Ser Ser
1   5   10   15

Leu Ile Thr

<210> 111
<211> 216
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

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

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

Ala Tyr Ile Ser Ser Gly Ser Ser Thr Ile Tyr Tyr Ala Asp Arg Val
    50                  55                  60

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

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

Ser Thr Gly Thr Phe Ala Tyr Trp Gly Gln Gly Thr Pro Val Thr Val
            100                 105                 110

Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly
        115                 120                 125

Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu Val Lys
    130                 135                 140

Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly Ser Leu
145                 150                 155                 160

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

Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser Glu
            180                 185                 190

Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys Val Asp
        195                 200                 205

Lys Lys Ile Val Pro Arg Asp Cys
    210                 215
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<210> 112
<211> 219
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 112
Asp Val Val Met Thr Gln Asn Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Ile Tyr Asn
20 25 30

Asn Gly Asn Thr Tyr Leu His Trp Tyr Arg Gln Lys Pro Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Val Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
180 185 190

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
210 215

<210> 113
<211> 265
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 113
Gln Asp Glu Val Thr Asp Asp Tyr Ile Gly Asp Asn Thr Thr Val Asp
1 5 10 15

Tyr Thr Leu Phe Glu Ser Leu Cys Ser Lys Lys Asp Val Arg Glu Val
20 25 30

Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu
35 40 45

Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr Gly Met
50 55 60

Leu Trp Val Arg Gln Ala Pro Glu Lys Gly Leu Glu Trp Ile Ala Tyr
65 70 75 80

Ile Ser Ser Gly Ser Ser Thr Ile Tyr Tyr Ala Asp Arg Val Lys Gly
85 90 95

Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln
100 105 110

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

Gly Thr Tyr Ser Asp Leu Gln Arg Ser Ser Ser Glu Gln Ala Met Arg
130 135 140

```
Ser Ser Leu Ile Thr Phe Ala Tyr Trp Gly Gln Gly Thr Pro Val Thr
145                 150                 155                 160


Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro
                165                 170                 175


Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu Val
            180                 185                 190


Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly Ser
        195                 200                 205


Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp Leu
    210                 215                 220


Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser
225                 230                 235                 240


Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys Val
                245                 250                 255


Asp Lys Lys Ile Val Pro Arg Asp Cys
            260                 265
```

<210> 114
<211> 795
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 114
caagatgagg tcacggacga ttacatcgga gacaacacca cagtggacta cactttgttc 60

gagtctttgt gctccaagaa ggacgtgcgg gaggtgcagc tggtggagtc tggtggtggt 120

ctggtcaagc ctggaggttc cctgaaactg agttgtgccg catctgggtt tacattctct 180

gactacggaa tgctgtgggt gaggcaggca ccagagaagg gcctggaatg gatcgcttat 240

atttccagcg gatctagtac tatctactat gcagacaggg tcaagggccg gttcaccatt 300

agcagagata acgccaaaaa taccctgttt ctgcagatga catcactgag gtccgaggat 360

accgctatgt attattgctc cacagggact tacagtgacc tccagaggag cagcagtgag 420

caagcgatgc gatcctctct catcacattt gcttactggg gacaggggac acccgtgacc 480

gtcagctcag ccaagaccac ccccccagc gtgtaccctc tggcccctgg ctctgccgcc 540

cagaccaaca gcatggtgac cctgggctgc ctggtgaagg gctacttccc cgagcccgtg 600

accgtgacct ggaacagcgg cagcctgagc agcggcgtgc acaccttccc cgccgtgctg 660

cagagcgacc tgtacaccct gagcagctct gtgaccgtgc ccagcagcac ctggcccagc 720

gagaccgtga catgcaacgt ggcccacccc gccagctcca ccaaggtgga caagaaaatc 780

gtgccccggg actgc 795

<210> 115
<211> 656
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 115
atgtcgtgat gactcagaat ccactgtccc tgcctgtgtc cctgggcgat caggcttcca 60

ttagctgtcg ttcctctcag tccctgatct acaacaatgg taacacctac ctgcactggt 120

atagacagaa gcccggccag tcccctaagc tgctgatcta caaagtgagt aataggttct 180

caggagtccc agaccggttt tccggcagcg gatctgggac cgatttcaca ctgaaaatct 240

ctagggtgga ggccgaagac ctgggcgtct acttttgtag tcagagcact cacgtcccct 300

tcaccttcgg cagcggaaca aaactggaaa tcaagcgcgc tgatgccgcc cctaccgtga 360

gcatcttccc ccccagcagc gagcagctga ccagcggcgg agccagcgtg gtgtgcttcc 420

tgaacaactt ctaccccaag gacatcaacg tgaagtggaa gatcgacggc agcgagcggc 480

agaacggcgt gctgaacagc tggaccgacc aggacagcaa ggactccacc tacagcatga 540

gcagcaccct gaccctgacc aaggacgagt acgagcggca caacagctac acctgcgagg 600

ccacccacaa gaccagcacc agccccatcg tgaagagctt caaccggaac gagtgc 656

<210> 116

<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 116
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser Trp His
1 5 10

<210> 117
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 117
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 118
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 118
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 119
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 119
Ser Gly Tyr Ser Trp His
1 5

<210> 120
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 120
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 121
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 121
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 122
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 122
Gly Tyr Ser Ile Thr Ser Gly Tyr
1 5

<210> 123
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 123
His Ser Ser Gly Ser
1 5

<210> 124
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 124
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 125
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 125
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser
1 5

<210> 126
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 126
Ile His Ser Ser Gly Ser Thr
1 5

<210> 127
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 127
Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr
1 5 10

<210> 128
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 128
Asp Val Gln Leu Gln Glu Ser Gly Pro Asp Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ala
        115

<210> 129
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 129
gatgtgcagc ttcaggagtc aggacctgac ctggtgaaac cttctcagtc actttcactc 60

acctgcactg tcactggcta ctccatcacc agtggttata gctggcactg gatccggcag 120

tttccaggaa acaaactgga gtggatggcc cacatccact ccagtggtag cactaactac 180

aacccatctc tcaaaagtcg catctctatc attcgagaca catccaagaa cctgttcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc aagaggggggg 300

gtacaggcct ttgcttactg gggccaaggg actctggtca ctgtctctgc a 351

<210> 130
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 130
Asp Val Gln Leu Gln Glu Ser Gly Pro Asp Leu Val Lys Pro Ser Gln
1   5   10   15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Gly
            20   25   30

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

Met Ala His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu

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    50                  55                  60

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270
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Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
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<210> 131
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 131
gatgtgcagc ttcaggagtc aggacctgac ctggtgaaac cttctcagtc actttcactc 60

acctgcactg tcactggcta ctccatcacc agtggttata gctggcactg gatccggcag 120

tttccaggaa acaaactgga gtggatggcc cacatccact ccagtggtag cactaactac 180

aacccatctc tcaaaagtcg catctctatc attcgagaca catccaagaa cctgttcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc aagaggggg 300

gtacaggcct ttgcttactg gggccaaggg actctggtca ctgtctctgc agctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc cccgagcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggacgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctgccagcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc ccagcgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 132
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 132
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 133
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 133
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 134
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 134
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 135
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 135
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 136
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 136
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 137
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 137
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 138
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 138
Ser Ser Ser Val Ile Tyr
1 5

<210> 139
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 139
Asp Thr Ser
1

<210> 140
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 140
Trp Ser Ser Asn Pro Leu
1 5

<210> 141
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 141
Ser Ser Val Ile Tyr
1 5

<210> 142
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 142
Asp Thr Ser
1

<210> 143
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 143
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 144
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 144
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1 5 10 15

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
85 90 95

Phe Gly Ala Gly Thr Thr Leu Glu Leu Lys
100 105

<210> 145
<211> 318

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 145
caaattgtcc tcacccagtc tccagcaatc atgtctgcat ctccagggga gaaggtcacc 60

atgacctgca gtgccagttc aagtgtaatt tacatgcact ggtaccagca gaagtcaggc 120

acctccccca aaagatggat ttatgacaca tccaaactgg cttctggagt ccctgctcgc 180

ttcagtggta gtgggtctgg gacctcttac tctctcacaa tcagcagcat ggaggctgaa 240

gatgctgcca cttattactg ccagcagtgg agtagtaacc cgctcacgtt cggtgctggg 300

accacgttgg agctgaaa 318

<210> 146
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 146
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1 5 10 15

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr

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                85                  90                  95

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

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210


<210> 147
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 147
caaattgtcc tcacccagtc tccagcaatc atgtctgcat ctccagggga gaaggtcacc       60

atgacctgca gtgccagttc aagtgtaatt tacatgcact ggtaccagca gaagtcaggc      120

acctccccca aaagatggat ttatgacaca tccaaactgg cttctggagt ccctgctcgc      180

ttcagtggta gtgggtctgg gacctcttac tctctcacaa tcagcagcat ggaggctgaa      240
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gatgctgcca cttattactg ccagcagtgg agtagtaacc cgctcacgtt cggtgctggg 300

accacgttgg agctgaaacg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 148
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 148
Gly Phe Thr Phe Ser Thr Tyr Ala Met Ser
1 5 10

<210> 149
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 149
Thr Ile Ser Asp Gly Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 150
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 150
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 151
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 151
Thr Tyr Ala Met Ser
1 5

<210> 152
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 152
Thr Ile Ser Asp Gly Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 153
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 153
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1   5   10

<210> 154
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 154
Gly Phe Thr Phe Ser Thr Tyr
1   5

<210> 155
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 155
Ser Asp Gly Gly Ser Tyr
1   5

<210> 156
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 156
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1   5   10

<210> 157
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 157
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 158
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 158
Ile Ser Asp Gly Gly Ser Tyr Ser
1 5

<210> 159
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 159
Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10 15

<210> 160
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 160
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

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

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

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

Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
115 120

<210> 161
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 161
gaagtgcagc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt acctatgcca tgtcttgggt tcgccagact 120

ccggaaaaga ggctggagtg ggtcgcaacc attagtgatg gtggtagtta ttcgtactat 180

ccagacaatg taaagggccg attcaccatc tccagagaca atgccaagaa caacctatac 240

ctgcaaatga gccatctgaa gtctgaggac acagccatgt attactgtgc aagacgaggt 300

agtaggtacg aagagtacta tgttatggac tactggggtc aaggaacctc agtcaccgtc 360

tcctca 366

<210> 162
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 162
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

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

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

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

Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
115 120 125

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

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
145 150 155 160

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro

```
                165                 170                 175

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
    210                 215                 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
            260                 265                 270

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
                325                 330                 335

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
        355                 360                 365

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
    370                 375                 380
```

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Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400


Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
                405                 410                 415


Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430


Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445


Ser Pro Gly Lys
    450
```

<210> 163
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 163
gaagtgcagc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt acctatgcca tgtcttgggt tcgccagact 120

ccggaaaaga ggctggagtg ggtcgcaacc attagtgatg gtggtagtta ttcgtactat 180

ccagacaatg taaagggccg attcaccatc tccagagaca atgccaagaa caacctatac 240

ctgcaaatga gccatctgaa gtctgaggac acagccatgt attactgtgc aagacgaggt 300

agtaggtacg aagagtacta tgttatggac tactggggtc aaggaacctc agtcaccgtc 360

tcctcagcta gcaccaaggg cccaagtgtg tttcccctgg cccccagcag caagtctact 420

tccggcggaa ctgctgccct gggttgcctg gtgaaggact acttccccga gcccgtgaca 480

gtgtcctgga actctggggc tctgacttcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gagcagcgtg gtgacagtgc cctccagctc tctgggaacc 600

cagacctata tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgcccccct gcccagctcc agaactgctg 720

ggagggcctt ccgtgttcct gttccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgtcccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaagaat acaagtgcaa agtctccaac aaggccctgc cagccccaat cgaaaagaca 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc ccccagccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gatatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agtccctgag cctgagcccc ggcaag 1356

<210> 164
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 164
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 165
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 165
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 166
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 166
Gln Gln Ser Asn Ser Trp Leu Thr
1 5

<210> 167
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 167
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 168
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 168
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 169
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 169
Gln Gln Ser Asn Ser Trp Leu Thr
1 5

<210> 170
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 170
Ser Gln Ser Ile Ser Asn Asn
1 5

<210> 171
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 171
Tyr Ala Ser
1

<210> 172
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 172
Ser Asn Ser Trp Leu
1 5

<210> 173
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 173
Gln Ser Ile Ser Asn Asn
1 5

<210> 174
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 174
Tyr Ala Ser
1

<210> 175
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 175
Gln Gln Ser Asn Ser Trp Leu Thr
1 5

<210> 176
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 176

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


Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn
            20                  25                  30


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


Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
    50                  55                  60


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


Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser Trp Leu Thr
                85                  90                  95


Phe Gly Ala Gly Thr Lys Leu Gly Leu Lys
            100                 105


<210> 177
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 177
gatattgtgc taactcagtc tccagccacc ctgtctgtga ctccaggaga tagcgtcagt       60

ctttcctgca gggccagcca aagtattagc aacaacctac actggtatca acagaaatca      120

catgagtctc caaaacttct catcaagtat gcttcccagt ccatctctgg gatcccctcc      180

aggttcagtg gcagtggatc agggacagat ttcactctca gtatcaacag tgtggagact      240

gaagattttg gaatgtattt ctgtcaacag agtaacagct ggctcacgtt cggtgctggg      300

accaagctgg ggctgaaa                                                    318


<210> 178
<211> 213
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<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 178
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro Gly
1 5 10 15

Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn
20 25 30

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser Trp Leu Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Gly Leu Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala

180 185 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
195 200 205

Asn Arg Gly Glu Cys
210

<210> 179
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 179
gatattgtgc taactcagtc tccagccacc ctgtctgtga ctccaggaga tagcgtcagt 60

ctttcctgca gggccagcca aagtattagc aacaacctac actggtatca acagaaatca 120

catgagtctc caaaacttct catcaagtat gcttcccagt ccatctctgg gatcccctcc 180

aggttcagtg gcagtggatc agggacagat ttcactctca gtatcaacag tgtggagact 240

gaagattttg gaatgtattt ctgtcaacag agtaacagct ggctcacgtt cggtgctggg 300

accaagctgg ggctgaaacg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 180
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 180
Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser
1   5   10

<210> 181
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 181
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1   5   10   15

Gly

<210> 182
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 182
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1   5   10

<210> 183
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 183
Ser Tyr Ala Met Ser
1   5

<210> 184
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 184
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 185
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 185
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 186
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 186
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 187
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 187
Ser Ser Gly Gly Ser Phe
1 5

<210> 188
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 188
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 189
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 189
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 190
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 190
Ile Ser Ser Gly Gly Ser Phe Thr
1 5

<210> 191
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 191
Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1   5   10

<210> 192
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 192
Glu Val Met Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

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

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

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

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

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

Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
            100   105   110

Ala Gly Thr Thr Val Thr Val Ser Ser
        115   120

<210> 193
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 193
gaagtgatgc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc   60

tcctgtgcag cctctggatt cactttcagt agctatgcca tgtcttggat tcgccagact   120

ccggagaaga gactggagtg ggtcgcaacc atcagtagtg gtggtagttt cacctactat   180

ccagacagtg tgaaggggcg attcaccatt tctagagaca atgtcaagaa caccctgtac   240

ctgcaaatga gcagtctgag gtctgaagac acggccatgt attactgtgc aagacgggct   300

tctacggtag taggtacgga cttcgatgtc tggggcgcag ggaccacggt caccgtctcc   360

tca   363

<210> 194
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 194
Glu Val Met Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

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

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

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

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

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

Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
            100                 105                 110

Ala Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
        115                 120                 125

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

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145                 150                 155                 160

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
```

```
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450
```

<210> 195
<211> 1353
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 195
gaagtgatgc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt agctatgcca tgtcttggat tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc atcagtagtg gtggtagttt cacctactat 180

ccagacagtg tgaaggggcg attcaccatt tctagagaca atgtcaagaa caccctgtac 240

ctgcaaatga gcagtctgag gtctgaagac acggccatgt attactgtgc aagacgggct 300

tctacggtag taggtacgga cttcgatgtc tggggcgcag ggaccacggt caccgtctcc 360

tcagctagca ccaagggccc aagtgtgttt cccctggccc ccagcagcaa gtctacttcc 420

ggcggaactg ctgccctggg ttgcctggtg aaggactact tccccgagcc cgtgacagtg 480

tcctggaact ctggggctct gacttccggc gtgcacacct tccccgccgt gctgcagagc 540

agcggcctgt acagcctgag cagcgtggtg acagtgccct ccagctctct gggaacccag 600

acctatatct gcaacgtgaa ccacaagccc agcaacacca aggtggacaa gagagtggag 660

cccaagagct gcgacaagac ccacacctgc ccccctgcc cagctccaga actgctggga 720

gggccttccg tgttcctgtt ccccccaag cccaaggaca ccctgatgat cagcaggacc 780

cccgaggtga cctgcgtggt ggtggacgtg tcccacgagg acccagaggt gaagttcaac 840

tggtacgtgg acggcgtgga ggtgcacaac gccaagacca agcccagaga ggagcagtac 900

aacagcacct acagggtggt gtccgtgctg accgtgctgc accaggactg gctgaacggc 960

aaagaataca agtgcaaagt ctccaacaag gccctgccag ccccaatcga aaagacaatc 1020

agcaaggcca agggccagcc acgggagccc caggtgtaca ccctgccccc cagccgggag 1080

gagatgacca agaaccaggt gtccctgacc tgtctggtga agggcttcta ccccagcgat 1140

atcgccgtgg agtgggagag caacggccag cccgagaaca actacaagac cacccccca 1200

gtgctggaca gcgacggcag cttcttcctg tacagcaagc tgaccgtgga caagtccagg 1260

tggcagcagg gcaacgtgtt cagctgcagc gtgatgcacg aggccctgca caaccactac 1320

acccagaagt ccctgagcct gagccccggc aag 1353

<210> 196
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 196
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 197
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 197
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 198
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 198
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 199
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 199
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 200
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 200
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 201
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 201
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 202
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 202
Ser Gln Asp Ile Gly Ser Ser
1 5

<210> 203
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 203
Ala Thr Ser
1

<210> 204
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 204
Tyr Ala Ser Ser Pro Pro
1 5

<210> 205
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 205
Gln Asp Ile Gly Ser Ser
1 5

<210> 206
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 206

Ala Thr Ser
1

<210> 207
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 207
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 208
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 208
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

Leu Asn Trp Leu Gln Gln Glu Pro Asp Gly Thr Ile Lys Arg Leu Ile
35 40 45

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 209
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 209
gacatccaga tgacccagtc tccatcctcc ttatctgcct ctctgggaga aagagtcagt 60

ctcacttgtc gggcaagtca ggacattggt agtagcttaa actggcttca gcaggaacca 120

gatggaacta ttaaacgcct gatctatgcc acatccagtt tagattctgg tgtccccaaa 180

aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240

gaagattttg tagtctatta ctgtctacaa tatgctagtt cgcctccgac gttcggtgga 300

ggcaccaagc tggaaatcaa a 321

<210> 210
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 210
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

Leu Asn Trp Leu Gln Gln Glu Pro Asp Gly Thr Ile Lys Arg Leu Ile
35 40 45

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
50 55 60

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


Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
                85                  90                  95


Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
            100                 105                 110


Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115                 120                 125


Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140


Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145                 150                 155                 160


Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165                 170                 175


Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180                 185                 190


Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195                 200                 205


Phe Asn Arg Gly Glu Cys
    210


<210> 211
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 211
gacatccaga tgacccagtc tccatcctcc ttatctgcct ctctgggaga aagagtcagt       60
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ctcacttgtc gggcaagtca ggacattggt agtagcttaa actggcttca gcaggaacca 120

gatggaacta ttaaacgcct gatctatgcc acatccagtt tagattctgg tgtccccaaa 180

aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240

gaagattttg tagtctatta ctgtctacaa tatgctagtt cgcctccgac gttcggtgga 300

ggcaccaagc tggaaatcaa acgtacggtg gccgctccca gcgtgttcat cttcccccc 360

agcgacgagc agctgaagag tggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420

ccccgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caacagccag 480

gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540

ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 212
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 212
Gly Phe Thr Phe Ser Asn Phe Ala Met Ser
1 5 10

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

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 213
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 214
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 214
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 215
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 215
Ser Asn Phe Ala Met Ser
1 5

<210> 216
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 216
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 217
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 217
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 218
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 218
Gly Phe Thr Phe Ser Asn Phe
1 5

<210> 219
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 219
Ser Thr Gly Gly Thr Tyr
1 5

<210> 220
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 220
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 221
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 221
Gly Phe Thr Phe Ser Asn Phe Ala
1 5

<210> 222
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 222
Ile Ser Thr Gly Gly Thr Tyr Thr
1 5

<210> 223
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 223
Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys
1 5 10

<210> 224
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 224
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

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

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

Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 225
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 225
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc a 351

<210> 226
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 226
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

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

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

Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
100 105 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser

```
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365
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```
Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
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<210> 227
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 227
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc agctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc cccgagcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggacgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctgccagcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc ccagcgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 228
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 228
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 229
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 229
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 230
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 230
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 231
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 231
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 232
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 232
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 233
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 233
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 234
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 234
Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1 5 10

<210> 235
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 235
Leu Val Ser
1

<210> 236
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 236
Gly Thr His Phe Pro Gln
1 5

<210> 237
<211> 11

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 237
Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1 5 10

<210> 238
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 238
Leu Val Ser
1

<210> 239
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 239
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 240
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 240

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


Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
            20                  25                  30


Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45


Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
    50                  55                  60


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


Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
                85                  90                  95


Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


<210> 241
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 241
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc       60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg      120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac      180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc      240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct      300

cagacgttcg gtggaggcac caagctggaa atcaaa                                336


<210> 242
<211> 219
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<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 242
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
85 90 95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu

180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
195 200 205

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

<210> 243
<211> 657
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 243
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc 60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg 120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac 180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc 240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct 300

cagacgttcg gtggaggcac caagctggaa atcaaacgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagtggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 244
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 244
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser Trp His
1   5   10

<210> 245
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 245
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1   5   10   15

<210> 246
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 246
Gly Gly Val Gln Ala Phe Ala Tyr
1   5

<210> 247
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 247
Ser Gly Tyr Ser Trp His
1   5

<210> 248
<211> 16
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 248
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 249
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 249
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 250
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 250
Gly Tyr Ser Ile Thr Ser Gly Tyr
1 5

<210> 251
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 251
His Ser Ser Gly Ser

1 5

<210> 252
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 252
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 253
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 253
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser
1 5

<210> 254
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 254
Ile His Ser Ser Gly Ser Thr
1 5

<210> 255
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 255
Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr
1 5 10

<210> 256
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 256
Asp Val Gln Leu Gln Glu Ser Gly Pro Asp Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ala
115

<210> 257
<211> 351

<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 257
gatgtgcagc ttcaggagtc aggacctgac ctggtgaaac cttctcagtc actttcactc 60

acctgcactg tcactggcta ctccatcacc agtggttata gctggcactg gatccggcag 120

tttccaggaa acaaactgga gtggatggcc cacatccact ccagtggtag cactaactac 180

aacccatctc tcaaaagtcg catctctatc attcgagaca catccaagaa cctgttcttc 240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc aagaggggg 300

gtacaggcct ttgcttactg gggccaaggg actctggtca ctgtctctgc a 351

<210> 258
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 258
Asp Val Gln Leu Gln Glu Ser Gly Pro Asp Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys

```
                85                  90                  95

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300
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Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320


Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335


Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350


Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365


Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380


Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400


Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415


Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430


His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445


<210> 259
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 259
gatgtgcagc ttcaggagtc aggacctgac ctggtgaaac cttctcagtc actttcactc       60

acctgcactg tcactggcta ctccatcacc agtggttata gctggcactg gatccggcag      120

tttccaggaa acaaactgga gtggatggcc cacatccact ccagtggtag cactaactac      180
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aacccatctc tcaaaagtcg catctctatc attcgagaca catccaagaa cctgttcttc      240

ctgcagttga attctgtgac tactgaggac acagccacat attactgtgc aagaggggg      300

gtacaggcct ttgcttactg gggccaaggg actctggtca ctgtctctgc agctagcacc      360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct      420

gccctgggtt gcctggtgaa ggactacttc ccctgtcccg tgacagtgtc ctggaactct      480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac      540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc      600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc      660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg      720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc      780

tgcgtggtgg tggacgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac      840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac      900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag      960

tgcaaagtct ccaacaaggc cctgccagcc ccaatcgaaa agacaatcag caaggccaag     1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag     1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc cctgtgatat cgccgtggag     1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc     1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc     1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc     1320

ctgagcctga gccccggcaa g                                               1341
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<210> 260
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 260
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1   5   10

<210> 261
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 261
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 262
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 262
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 263
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 263
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 264
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 264
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 265
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 265
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 266
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 266
Ser Ser Ser Val Ile Tyr
1 5

<210> 267
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 267
Asp Thr Ser
1

<210> 268

<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 268
Trp Ser Ser Asn Pro Leu
1 5

<210> 269
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 269
Ser Ser Val Ile Tyr
1 5

<210> 270
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 270
Asp Thr Ser
1

<210> 271
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 271
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1   5

<210> 272
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 272
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1   5   10   15

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
            20   25   30

His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
        35   40   45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50   55   60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65   70   75   80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
                85   90   95

Phe Gly Ala Gly Thr Thr Leu Glu Leu Lys
            100   105

<210> 273
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 273
caaattgtcc tcacccagtc tccagcaatc atgtctgcat ctccagggga gaaggtcacc 60

atgacctgca gtgccagttc aagtgtaatt tacatgcact ggtaccagca gaagtcaggc 120

acctccccca aaagatggat ttatgacaca tccaaactgg cttctggagt ccctgctcgc 180

ttcagtggta gtgggtctgg gacctcttac tctctcacaa tcagcagcat ggaggctgaa 240

gatgctgcca cttattactg ccagcagtgg agtagtaacc cgctcacgtt cggtgctggg 300

accacgttgg agctgaaa 318

<210> 274
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 274
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1 5 10 15

Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr
35 40 45

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Leu Thr
85 90 95

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

Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr

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        115                 120                 125

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210
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<210> 275
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 275
caaattgtcc tcacccagtc tccagcaatc atgtctgcat ctccagggga gaaggtcacc 60

atgacctgca gtgccagttc aagtgtaatt tacatgcact ggtaccagca gaagtcaggc 120

acctccccca aaagatggat ttatgacaca tccaaactgg cttctggagt ccctgctcgc 180

ttcagtggta gtgggtctgg gacctcttac tctctcacaa tcagcagcat ggaggctgaa 240

gatgctgcca cttattactg ccagcagtgg agtagtaacc cgctcacgtt cggtgctggg 300

accacgttgg agctgaaacg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 276
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 276
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser Trp His
1 5 10

<210> 277
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 277
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 278
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 278
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 279
<211> 6

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 279
Ser Gly Tyr Ser Trp His
1 5

<210> 280
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 280
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1 5 10 15

<210> 281
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 281
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 282
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 282

Gly Tyr Ser Ile Thr Ser Gly Tyr
1   5

<210> 283
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 283
His Ser Ser Gly Ser
1   5

<210> 284
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 284
Gly Gly Val Gln Ala Phe Ala Tyr
1   5

<210> 285
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 285
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser
1   5

<210> 286
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 286
Ile His Ser Ser Gly Ser Thr
1 5

<210> 287
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 287
Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr
1 5 10

<210> 288
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 288
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 289
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 289
gacgtgcagc tgcaggaatc tggccctggc ctggtgaaac cctcccagac cctgtccctg 60

acctgcaccg tgtccggcta ctccatcacc tccggctaca gctggcactg gatccggcag 120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac 180

aaccccagcc tgaagtccag aatcaccatc agccgggaca cctccaagaa ccagttctcc 240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc 300

gtgcaggcct tcgcttattg gggccagggc accctggtga cagtgtcctc c 351

<210> 290
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 290
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly

```
            20                  25                  30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240
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```
Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Ala Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365

Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
```

<210> 291

<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 291
gacgtgcagc tgcaggaatc tggccctggc ctggtgaaac cctcccagac cctgtccctg 60

acctgcaccg tgtccggcta ctccatcacc tccggctaca gctggcactg gatccggcag 120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac 180

aaccccagcc tgaagtccag aatcaccatc agccgggaca cctccaagaa ccagttctcc 240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc 300

gtgcaggcct tcgcttattg gggccagggc accctggtga cagtgtcctc cgctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc ccctgtcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggccgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctggctgcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgccccccа gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc cctgtgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 292
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 292
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 293
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 293
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 294
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 294
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 295
<211> 10
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 295
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 296
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 296
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 297
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 297
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 298
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 298
Ser Ser Ser Val Ile Tyr
1 5

<210> 299
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 299
Asp Thr Ser
1

<210> 300
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 300
Trp Ser Ser Asn Pro Leu
1   5

<210> 301
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 301
Ser Ser Val Ile Tyr
1   5

<210> 302
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 302
Asp Thr Ser
1

<210> 303
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 303
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 304
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 304
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Pro Gly
1 5 10 15

Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

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

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 305
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 305
gagatcgtgc tgacccagtc ccctgccacc ctgtctgcta gccctggcga gcgcgtgaca 60

atgtcctgct ccgcctcctc ctccgtgatc tacatgcact ggtatcagca gaagcccggc 120

caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga 180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag 240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ccctgacctt cggccagggc 300

accaagctgg aaatcaag 318

<210> 306
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 306
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Pro Gly
1 5 10 15

Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

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

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser

```
    50                  55                  60

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210


<210> 307
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 307
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gagatcgtgc tgacccagtc ccctgccacc ctgtctgcta gccctggcga gcgcgtgaca 60

atgtcctgct ccgcctcctc ctccgtgatc tacatgcact ggtatcagca gaagcccggc 120

caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga 180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag 240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ccctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 308
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 308
Gly Phe Thr Phe Ser Thr Tyr Ala Met Ser
1 5 10

<210> 309
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 309
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 310
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 310
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 311
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 311
Thr Tyr Ala Met Ser
1 5

<210> 312
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 312
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 313
<211> 13

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 313
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 314
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 314
Gly Phe Thr Phe Ser Thr Tyr
1 5

<210> 315
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 315
Ser Asp Ala Gly Ser Tyr
1 5

<210> 316
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 316

Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 317
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 317
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 318
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 318
Ile Ser Asp Ala Gly Ser Tyr Ser
1 5

<210> 319
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 319
Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10 15

<210> 320
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 320
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

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

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

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

Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser
115 120

<210> 321
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 321
gaagtgcagc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt acctatgcca tgtcttgggt tcgccagact 120

ccggaaaaga ggctggagtg ggtcgcaacc attagtgatg gtggtagtta ttcgtactat 180

ccagacaatg taaagggccg attcaccatc tccagagaca atgccaagaa caacctatac 240

ctgcaaatga gccatctgaa gtctgaggac acagccatgt attactgtgc aagacgaggt 300

agtaggtacg aagagtacta tgttatggac tactggggtc aaggaacctc agtcaccgtc 360

tcctca 366

<210> 322
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 322
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

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

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

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

Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
115 120 125

Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr

```
    130                 135                 140

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

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
                165                 170                 175

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
    210                 215                 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
            260                 265                 270

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
                325                 330                 335

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350
```

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
355 360 365

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val
370 375 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385 390 395 400

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
405 410 415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
420 425 430

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
435 440 445

Ser Pro Gly Lys
450

<210> 323
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 323
gaagtgcagc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt acctatgcca tgtcttgggt tcgccagact 120

ccggaaaaga ggctggagtg ggtcgcaacc attagtgatg gtggtagtta ttcgtactat 180

ccagacaatg taaagggccg attcaccatc tccagagaca atgccaagaa caacctatac 240

ctgcaaatga gccatctgaa gtctgaggac acagccatgt attactgtgc aagacgaggt 300

agtaggtacg aagagtacta tgttatggac tactggggtc aaggaacctc agtcaccgtc 360

tcctcagcta gcaccaaggg cccaagtgtg tttcccctgg cccccagcag caagtctact 420

tccggcggaa ctgctgccct gggttgcctg gtgaaggact acttcccctg tcccgtgaca 480

gtgtcctgga actctggggc tctgacttcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gagcagcgtg gtgacagtgc cctccagctc tctgggaacc 600

cagacctata tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgcccccccct gcccagctcc agaactgctg 720

ggagggcctt ccgtgttcct gttcccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggac gtgtcccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaagaat acaagtgcaa agtctccaac aaggccctgc cagccccaat cgaaaagaca 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc ccccagccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctacccctgt 1140

gatatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccacccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agtccctgag cctgagcccc ggcaag 1356

<210> 324
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 324
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 325
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 325
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 326
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 326
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 327
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 327
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 328
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 328
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 329
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 329
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 330
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 330
Ser Gln Ser Ile Ser Asn Asn
1 5

<210> 331
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 331
Tyr Ala Ser
1

<210> 332
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 332
Ser Ser Ser Trp Leu
1   5

<210> 333
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 333
Gln Ser Ile Ser Asn Asn
1   5

<210> 334
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 334
Tyr Ala Ser
1

<210> 335
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 335
Gln Gln Ser Ser Ser Trp Leu Thr
1   5

<210> 336
<211> 106
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 336
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro Gly
1 5 10 15

Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn
20 25 30

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser Trp Leu Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Gly Leu Lys
100 105

<210> 337
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 337
gatattgtgc taactcagtc tccagccacc ctgtctgtga ctccaggaga tagcgtcagt 60

ctttcctgca gggccagcca aagtattagc aacaacctac actggtatca acagaaatca 120

catgagtctc caaaacttct catcaagtat gcttcccagt ccatctctgg gatcccctcc 180

aggttcagtg gcagtggatc agggacagat ttcactctca gtatcaacag tgtggagact 240

gaagattttg gaatgtattt ctgtcaacag agtaacagct ggctcacgtt cggtgctggg 300

accaagctgg ggctgaaa 318

<210> 338
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 338
Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro Gly
1 5 10 15

Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn
20 25 30

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Asn Ser Trp Leu Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Gly Leu Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu

```
145                 150                 155                 160

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210
```

<210> 339
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 339
gatattgtgc taactcagtc tccagccacc ctgtctgtga ctccaggaga tagcgtcagt 60

ctttcctgca gggccagcca aagtattagc aacaacctac actggtatca acagaaatca 120

catgagtctc caaaacttct catcaagtat gcttcccagt ccatctctgg gatcccctcc 180

aggttcagtg gcagtggatc agggacagat ttcactctca gtatcaacag tgtggagact 240

gaagattttg gaatgtattt ctgtcaacag agtaacagct ggctcacgtt cggtgctggg 300

accaagctgg ggctgaaacg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 340

<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 340
Gly Phe Thr Phe Ser Thr Tyr Ala Met Ser
1 5 10

<210> 341
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 341
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 342
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 342
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 343
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 343
Thr Tyr Ala Met Ser
1 5

<210> 344
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 344
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 345
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 345
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 346
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 346

Gly Phe Thr Phe Ser Thr Tyr
1 5

<210> 347
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 347
Ser Asp Ala Gly Ser Tyr
1 5

<210> 348
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 348
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 349
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 349
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 350
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 350
Ile Ser Asp Ala Gly Ser Tyr Ser
1 5

<210> 351
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 351
Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10 15

<210> 352
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 352
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
            100                 105                 110


Gly Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 353
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 353
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg       60

tcctgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt gcggcaggct      120

cccggcaagg gcctggaatg ggtggccacc atctccgacg ccggctccta ctcctactac      180

cccgacaacg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac      240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc      300

tccagatacg aagagtacta cgtgatggac tattggggcc agggcaccac cgtgacagtg      360

tcctcc                                                                 366


<210> 354
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 354
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15
```

```
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr Tyr
            20                  25                  30

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
        115                 120                 125

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

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

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
                165                 170                 175

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
    210                 215                 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
```

```
225                 230                 235                 240

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser
            260                 265                 270

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro
                325                 330                 335

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
        355                 360                 365

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val
    370                 375                 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
                405                 410                 415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445
```

Ser Pro Gly Lys
450

<210> 355
<211> 1356
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 355
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt gcggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctccgacg ccggctccta ctcctactac 180

cccgacaacg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc 300

tccagatacg aagagtacta cgtgatggac tattggggcc agggcaccac cgtgacagtg 360

tcctccgcta gcaccaaggg cccaagtgtg tttcccctgg cccccagcag caagtctact 420

tccggcggaa ctgctgccct gggttgcctg gtgaaggact acttccccctg tcccgtgaca 480

gtgtcctgga actctggggc tctgacttcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gagcagcgtg gtgacagtgc cctccagctc tctgggaacc 600

cagacctata tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagctcc agaactgctg 720

ggagggcctt ccgtgttcct gttcccccccc aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggcc gtgtcccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaagaat acaagtgcaa agtctccaac aaggccctgg ctgccccaat cgaaaagaca 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc ccccagccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctacccctgt 1140

gatatcgccg tggagtggga gagcaacggc cagcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agtccctgag cctgagcccc ggcaag 1356

<210> 356
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 356
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 357
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 357
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 358
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 358
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 359
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 359
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 360
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 360
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 361
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 361
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 362
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 362
Ser Gln Ser Ile Ser Asn Asn
1   5

<210> 363
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 363
Tyr Ala Ser
1

<210> 364
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 364
Ser Ser Ser Trp Leu
1   5

<210> 365
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 365
Gln Ser Ile Ser Asn Asn
1   5

<210> 366
<211> 3
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 366
Tyr Ala Ser
1

<210> 367
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 367
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 368
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 368
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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


Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr
                85                  90                  95


Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 369
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 369
gagatcgtgc tgacccagtc ccctgccacc ctgtccgtgt ctcccggcga gagagtgacc       60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc      120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc      180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc      240

gaggacttcg gcgtgtactt ctgccagcag tcctcatcct ggctgacctt cggccagggc      300

accaagctgg aaatcaag                                                    318


<210> 370
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 370
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1               5                   10                  15


Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn Asn
            20                  25                  30
```

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
    50                  55                  60

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

Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr
                85                  90                  95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
            100                 105                 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
    130                 135                 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
                165                 170                 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
            180                 185                 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
        195                 200                 205

Asn Arg Gly Glu Cys
    210
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<210> 371
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 371
gagatcgtgc tgacccagtc ccctgccacc ctgtccgtgt ctcccggcga gagagtgacc 60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc 120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc 180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc 240

gaggacttcg gcgtgtactt ctgccagcag tcctcatcct ggctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 372
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 372
Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser
1 5 10

<210> 373
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 373
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1   5   10   15

Gly

<210> 374
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 374
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1   5   10

<210> 375
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 375
Ser Tyr Ala Met Ser
1   5

<210> 376
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 376
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1   5   10   15

Gly

<210> 377
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 377
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 378
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 378
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 379
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 379
Ser Ser Gly Gly Ser Phe
1 5

<210> 380
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 380
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 381
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 381
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 382
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 382
Ile Ser Ser Gly Gly Ser Phe Thr
1 5

<210> 383
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 383
Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 384
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 384
Glu Val Met Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
100 105 110

Ala Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 385
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 385
gaagtgatgc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt agctatgcca tgtcttggat tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc atcagtagtg gtggtagttt cacctactat 180

ccagacagtg tgaaggggcg attcaccatt tctagagaca atgtcaagaa caccctgtac 240

ctgcaaatga gcagtctgag gtctgaagac acggccatgt attactgtgc aagacgggct 300

tctacggtag taggtacgga cttcgatgtc tggggcgcag ggaccacggt caccgtctcc 360

tca 363

<210> 386
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 386
Glu Val Met Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
100 105 110

```
Ala Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
        115                 120                 125

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

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
```

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                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450


<210> 387
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 387
gaagtgatgc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc       60

tcctgtgcag cctctggatt cactttcagt agctatgcca tgtcttggat tcgccagact      120

ccggagaaga gactggagtg ggtcgcaacc atcagtagtg gtggtagttt cacctactat      180

ccagacagtg tgaaggggcg attcaccatt tctagagaca atgtcaagaa caccctgtac      240
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ctgcaaatga gcagtctgag gtctgaagac acggccatgt attactgtgc aagacgggct 300

tctacggtag taggtacgga cttcgatgtc tggggcgcag ggaccacggt caccgtctcc 360

tcagctagca ccaagggccc aagtgtgttt cccctggccc ccagcagcaa gtctacttcc 420

ggcggaactg ctgccctggg ttgcctggtg aaggactact tcccctgtcc cgtgacagtg 480

tcctggaact ctggggctct gacttccggc gtgcacacct tccccgccgt gctgcagagc 540

agcggcctgt acagcctgag cagcgtggtg acagtgccct ccagctctct gggaacccag 600

acctatatct gcaacgtgaa ccacaagccc agcaacacca aggtggacaa gagagtggag 660

cccaagagct gcgacaagac ccacacctgc ccccctgcc cagctccaga actgctggga 720

gggccttccg tgttcctgtt ccccccaag cccaaggaca ccctgatgat cagcaggacc 780

cccgaggtga cctgcgtggt ggtggacgtg tcccacgagg acccagaggt gaagttcaac 840

tggtacgtgg acggcgtgga ggtgcacaac gccaagacca agcccagaga ggagcagtac 900

aacagcacct acagggtggt gtccgtgctg accgtgctgc accaggactg gctgaacggc 960

aaagaataca agtgcaaagt ctccaacaag gccctgccag ccccaatcga aaagacaatc 1020

agcaaggcca agggccagcc acgggagccc caggtgtaca ccctgccccc cagccgggag 1080

gagatgacca agaaccaggt gtccctgacc tgtctggtga agggcttcta cccctgtgat 1140

atcgccgtgg agtgggagag caacggccag cccgagaaca actacaagac cacccccca 1200

gtgctggaca gcgacggcag cttcttcctg tacagcaagc tgaccgtgga caagtccagg 1260

tggcagcagg gcaacgtgtt cagctgcagc gtgatgcacg aggccctgca caaccactac 1320

acccagaagt ccctgagcct gagccccggc aag 1353

<210> 388
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 388
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 389
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 389
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 390
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 390
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 391
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 391
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 392
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 392
Ala Thr Ser Ser Leu Asp Ser
1   5

<210> 393
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 393
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1   5

<210> 394
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 394
Ser Gln Asp Ile Gly Ser Ser
1   5

<210> 395
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 395
Ala Thr Ser
1

<210> 396
<211> 6
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 396
Tyr Ala Ser Ser Pro Pro
1 5

<210> 397
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 397
Gln Asp Ile Gly Ser Ser
1 5

<210> 398
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 398
Ala Thr Ser
1

<210> 399
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 399
Leu Gln Tyr Ala Ser Ser Pro Pro Thr

1 5

<210> 400
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 400
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

Leu Asn Trp Leu Gln Gln Glu Pro Asp Gly Thr Ile Lys Arg Leu Ile
35 40 45

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 401
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 401
gacatccaga tgacccagtc tccatcctcc ttatctgcct ctctgggaga aagagtcagt 60

ctcacttgtc gggcaagtca ggacattggt agtagcttaa actggcttca gcaggaacca 120

gatggaacta ttaaacgcct gatctatgcc acatccagtt tagattctgg tgtccccaaa 180

aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240

gaagattttg tagtctatta ctgtctacaa tatgctagtt cgcctccgac gttcggtgga 300

ggcaccaagc tggaaatcaa a 321

<210> 402
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 402
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

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

Leu Asn Trp Leu Gln Gln Glu Pro Asp Gly Thr Ile Lys Arg Leu Ile
35 40 45

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Lys Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

```
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145                 150                 155                 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165                 170                 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180                 185                 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195                 200                 205

Phe Asn Arg Gly Glu Cys
    210
```

<210> 403
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 403
gacatccaga tgacccagtc tccatcctcc ttatctgcct ctctgggaga aagagtcagt 60

ctcacttgtc gggcaagtca ggacattggt agtagcttaa actggcttca gcaggaacca 120

gatggaacta ttaaacgcct gatctatgcc acatccagtt tagattctgg tgtccccaaa 180

aggttcagtg gcagtaggtc tgggtcagat tattctctca ccatcagcag ccttgagtct 240

gaagattttg tagtctatta ctgtctacaa tatgctagtt cgcctccgac gttcggtgga 300

ggcaccaagc tggaaatcaa acgtacggtg gccgctccca gcgtgttcat cttccccccc 360

agcgacgagc agctgaagag tggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420

ccccgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caacagccag 480

gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540

ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 404
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 404
Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser
1 5 10

<210> 405
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 405
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 406
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 406
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 407
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 407
Ser Tyr Ala Met Ser
1 5

<210> 408
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 408
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 409
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 409
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 410
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 410
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 411
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 411
Ser Ser Gly Gly Ser Phe
1 5

<210> 412
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 412
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 413
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 413
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 414
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 414
Ile Ser Ser Gly Gly Ser Phe Thr
1 5

<210> 415
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 415
Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 416
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 416
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

```
Ala Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val
    50                  55                  60


Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
            100                 105                 110


Gln Gly Thr Thr Val Thr Val Ser Ser
        115                 120


<210> 417
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 417
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg       60

tcctgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggct      120

cccggcaagg gcctggaatg ggtggccacc atctcctccg gcggcagctt cacctactac      180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac      240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc      300

tccaccgtcg tgggaaccga cttcgatgtg tggggccagg gcaccaccgt gacagtgtcc      360

tcc                                                                    363


<210> 418
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
```

polypeptide"

<400> 418

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
            100                 105                 110

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
        115                 120                 125

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

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

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205
```

```
Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
        355                 360                 365

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
```

420 425 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
435 440 445

Pro Gly Lys
450

<210> 419
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 419
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctcctccg gcggcagctt cacctactac 180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc 300

tccaccgtcg tgggaaccga cttcgatgtg tggggccagg gcaccaccgt gacagtgtcc 360

tccgctagca ccaagggccc aagtgtgttt cccctggccc ccagcagcaa gtctacttcc 420

ggcggaactg ctgccctggg ttgcctggtg aaggactact tcccctgtcc cgtgacagtg 480

tcctggaact ctggggctct gacttccggc gtgcacacct tccccgccgt gctgcagagc 540

agcggcctgt acagcctgag cagcgtggtg acagtgccct ccagctctct gggaacccag 600

acctatatct gcaacgtgaa ccacaagccc agcaacacca aggtggacaa gagagtggag 660

cccaagagct gcgacaagac ccacacctgc ccccctgcc cagctccaga actgctggga 720

gggccttccg tgttcctgtt ccccccaag cccaaggaca ccctgatgat cagcaggacc 780

cccgaggtga cctgcgtggt ggtggccgtg tcccacgagg acccagaggt gaagttcaac 840

tggtacgtgg acggcgtgga ggtgcacaac gccaagacca agcccagaga ggagcagtac 900

aacagcacct acagggtggt gtccgtgctg accgtgctgc accaggactg gctgaacggc 960

aaagaataca agtgcaaagt ctccaacaag gccctggctg ccccaatcga aaagacaatc 1020

agcaaggcca agggccagcc acgggagccc caggtgtaca ccctgccccc cagccgggag 1080

gagatgacca agaaccaggt gtccctgacc tgtctggtga agggcttcta cccctgtgat 1140

atcgccgtgg agtgggagag caacggccag cccgagaaca actacaagac cacccccca 1200

gtgctggaca gcgacggcag cttcttcctg tacagcaagc tgaccgtgga caagtccagg 1260

tggcagcagg gcaacgtgtt cagctgcagc gtgatgcacg aggccctgca caaccactac 1320

acccagaagt ccctgagcct gagccccggc aag 1353

<210> 420
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 420
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 421
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 421
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 422
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 422
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1   5

<210> 423
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 423
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1   5   10

<210> 424
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 424
Ala Thr Ser Ser Leu Asp Ser
1   5

<210> 425
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 425
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1   5

<210> 426
<211> 7
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 426
Ser Gln Asp Ile Gly Ser Ser
1 5

<210> 427
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 427
Ala Thr Ser
1

<210> 428
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 428
Tyr Ala Ser Ser Pro Pro
1 5

<210> 429
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 429
Gln Asp Ile Gly Ser Ser

1 5

<210> 430
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 430
Ala Thr Ser
1

<210> 431
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 431
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 432
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 432
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 433
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 433
gacatccaga tgacccagtc cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctccg gctctagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccccccccac ctttggcgga 300

ggcaccaagc tggaaatcaa g 321

<210> 434
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 434
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly

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1               5                   10                  15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
    50                  55                  60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
                85                  90                  95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
            100                 105                 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
        115                 120                 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
    130                 135                 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145                 150                 155                 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
                165                 170                 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
            180                 185                 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
        195                 200                 205

Phe Asn Arg Gly Glu Cys
    210
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<210> 435
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 435
gacatccaga tgacccagtc cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctccg gctctagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccccccccac ctttggcgga 300

ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttccccccc 360

agcgacgagc agctgaagag tggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420

ccccgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caacagccag 480

gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540

ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 436
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 436
Gly Phe Thr Phe Ser Asn Phe Ala Met Ser
1 5 10

<210> 437
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 437
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 438
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 438
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 439
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 439
Ser Asn Phe Ala Met Ser
1 5

<210> 440
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 440
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1   5   10   15

Gly

<210> 441
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 441
Arg Gly Tyr Asp Gly Val Asp Lys
1   5

<210> 442
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 442
Gly Phe Thr Phe Ser Asn Phe
1   5

<210> 443
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 443
Ser Thr Gly Gly Thr Tyr
1   5

<210> 444
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 444
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 445
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 445
Gly Phe Thr Phe Ser Asn Phe Ala
1 5

<210> 446
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 446
Ile Ser Thr Gly Gly Thr Tyr Thr
1 5

<210> 447
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 447
Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys
1 5 10

<210> 448
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 448
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

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

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

Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
100 105 110

Leu Thr Val Ser Ser
115

<210> 449
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 449
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc a 351

<210> 450
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 450
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

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

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

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Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
            100                 105                 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
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305 310 315 320

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
325 330 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
340 345 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
355 360 365

Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
370 375 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385 390 395 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
405 410 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
420 425 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 451
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 451
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc agctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc ccctgtcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggacgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctgccagcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc cctgtgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 452
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 452
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 453
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 453
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 454
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 454
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 455
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 455
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 456
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 456
Leu Val Ser Lys Leu Asp Ser
1   5

<210> 457
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 457
Trp Gln Gly Thr His Phe Pro Gln Thr
1   5

<210> 458
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 458
Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1   5   10

<210> 459
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 459
Leu Val Ser
1

<210> 460
<211> 6
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 460
Gly Thr His Phe Pro Gln
1 5

<210> 461
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 461
Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1 5 10

<210> 462
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 462
Leu Val Ser
1

<210> 463
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 463
Trp Gln Gly Thr His Phe Pro Gln Thr

1 5

<210> 464
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 464
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
85 90 95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 465
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 465
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc 60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg 120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac 180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc 240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct 300

cagacgttcg gtggaggcac caagctggaa atcaaa 336

<210> 466
<211> 219
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 466
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
85 90 95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

```
Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
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<210> 467
<211> 657
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 467
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc 60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg 120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac 180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc 240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct 300

cagacgttcg gtggaggcac caagctggaa atcaaacgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagtggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 468
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 468
Gly Phe Thr Phe Ser Asn Phe Ala Met Ser
1 5 10

<210> 469
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 469
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 470
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 470
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 471
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 471
Ser Asn Phe Ala Met Ser
1 5

<210> 472
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 472
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 473
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 473
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 474
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 474
Gly Phe Thr Phe Ser Asn Phe
1 5

<210> 475
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 475
Ser Thr Gly Gly Thr Tyr
1 5

<210> 476
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 476
Arg Gly Tyr Asp Gly Val Asp Lys
1 5

<210> 477
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 477
Gly Phe Thr Phe Ser Asn Phe Ala
1 5

<210> 478
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 478
Ile Ser Thr Gly Gly Thr Tyr Thr
1 5

<210> 479
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 479
Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys
1 5 10

<210> 480
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 480
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

```
Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
    50                  55                  60


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


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


Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
            100                 105                 110


Leu Thr Val Ser Ser
        115
```

<210> 481
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 481
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc a 351

<210> 482
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 482
Glu Val His Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
            20   25   30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
        35   40   45

Ala Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
    50   55   60

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

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

Thr Arg Arg Gly Tyr Asp Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
            100   105   110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130   135   140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145   150   155   160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165   170   175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180   185   190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195   200   205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His

```
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Ala Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365

Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430
```

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
435 440 445

<210> 483
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 483
gaagtgcatc tggtggagtc tgggggaggc ttagtgaagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt aactttgcca tgtcttgggt tcgccagact 120

ccggagaaga gactggagtg ggtcgcaacc attagtactg gtggtactta cacctactat 180

ccagacagtg tgaagggtcg attcaccatc tccagagaca atgccaagaa aaccctgtac 240

ctgcaaatga gcagtctgag gtctgaggac acggccatgt attactgtac aagacggggg 300

tacgacggcg tggacaaatg gggccaaggc accactctca cagtctcctc agctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc ccctgtcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggccgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctggctgcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc cctgtgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 484
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 484
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 485
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 485
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 486
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 486
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 487
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 487
Lys Ser Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 488
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 488
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 489
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 489
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 490
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 490
Gly Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1   5   10

<210> 491
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 491
Leu Val Ser
1

<210> 492
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 492
Gly Thr His Phe Pro Gln
1   5

<210> 493
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 493
Gln Ser Leu Leu Asp Ser Asp Gly Lys Thr Tyr
1   5   10

<210> 494
<211> 3
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 494
Leu Val Ser
1

<210> 495
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 495
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 496
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 496
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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


Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
                85                  90                  95


Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


<210> 497
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 497
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc       60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg      120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac      180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc      240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct      300

cagacgttcg gtggaggcac caagctggaa atcaaa                                336


<210> 498
<211> 219
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 498
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1               5                   10                  15


Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
            20                  25                  30
```

```
Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
    50                  55                  60

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

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly
                85                  90                  95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
    210                 215
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<210> 499
<211> 657
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 499
gatgttgtga tgacccagac tccactcact ttgtcggtta ccattggaca accagcctcc 60

atctcttgca agtcaggtca gagcctctta gatagtgatg gaaagacata tttgaattgg 120

tttttacaga ggccaggcca gtctccaaag cgcctaatct atctggtgtc taaactggac 180

tctggagtcc ctgacaggtt cactggcagt ggatcaggga cagatttcac actgaaaatc 240

agcagagtgg aggctgagga tttgggagtt tattattgct ggcaaggtac acattttcct 300

cagacgttcg gtggaggcac caagctggaa atcaaacgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagtggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 500
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 500
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser Trp His
1 5 10

<210> 501
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 501
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1   5   10   15

<210> 502
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 502
Gly Gly Val Gln Ala Phe Ala Tyr
1   5

<210> 503
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 503
Ser Gly Tyr Ser Trp His
1   5

<210> 504
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 504
His Ile His Ser Ser Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser
1   5   10   15

<210> 505
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 505
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 506
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 506
Gly Tyr Ser Ile Thr Ser Gly Tyr
1 5

<210> 507
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 507
His Ser Ser Gly Ser
1 5

<210> 508
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 508
Gly Gly Val Gln Ala Phe Ala Tyr
1 5

<210> 509
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 509
Gly Tyr Ser Ile Thr Ser Gly Tyr Ser
1 5

<210> 510
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 510
Ile His Ser Ser Gly Ser Thr
1 5

<210> 511
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 511
Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr
1 5 10

<210> 512
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 512
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 513
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 513
gacgtgcagc tgcaggaatc tggccctggc ctggtgaaac cctcccagac cctgtccctg 60

acctgcaccg tgtccggcta ctccatcacc tccggctaca gctggcactg gatccggcag 120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac 180

aaccccagcc tgaagtccag aatcaccatc agccgggaca cctccaagaa ccagttctcc 240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc 300

gtgcaggcct tcgcttattg gggccagggc accctggtga cagtgtcctc c 351

<210> 514
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 514
Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Tyr Ser Ile Thr Ser Gly
20 25 30

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

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

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

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

Ala Arg Gly Gly Val Gln Ala Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser

```
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Ala Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365
```

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Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445
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<210> 515
<211> 1341
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 515
gacgtgcagc tgcaggaatc tggccctggc ctggtgaaac cctcccagac cctgtccctg 60

acctgcaccg tgtccggcta ctccatcacc tccggctaca gctggcactg gatccggcag 120

caccccggca agggcctgga atggatggcc cacatccact cctccggctc caccaactac 180

aaccccagcc tgaagtccag aatcaccatc agccgggaca cctccaagaa ccagttctcc 240

ctgaagctgt cctccgtgac cgccgctgac accgccgtgt actactgtgc cagaggcggc 300

gtgcaggcct tcgcttattg gggccagggc accctggtga cagtgtcctc cgctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc cccgagcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggccgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctggctgcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgcccccca gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc ccagcgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 516
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 516
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 517
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 517
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 518
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 518
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 519
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 519
Ser Ala Ser Ser Ser Val Ile Tyr Met His
1 5 10

<210> 520
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 520
Asp Thr Ser Lys Leu Ala Ser
1 5

<210> 521
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 521
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 522
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 522
Ser Ser Ser Val Ile Tyr
1 5

<210> 523
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 523
Asp Thr Ser
1

<210> 524
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 524
Trp Ser Ser Asn Pro Leu
1 5

<210> 525
<211> 5

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 525
Ser Ser Val Ile Tyr
1 5

<210> 526
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 526
Asp Thr Ser
1

<210> 527
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 527
Gln Gln Trp Ser Ser Asn Pro Leu Thr
1 5

<210> 528
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 528

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


Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
            20                  25                  30


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


Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
    50                  55                  60


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


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


Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100                 105


<210> 529
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 529
gagatcgtgc tgacccagtc ccctgccacc ctgtctgcta gccctggcga gcgcgtgaca       60

atgtcctgct ccgcctcctc ctccgtgatc tacatgcact ggtatcagca gaagcccggc      120

caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga      180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag      240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ccctgacctt cggccagggc      300

accaagctgg aaatcaag                                                    318


<210> 530
<211> 213
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<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 530
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Pro Gly
1 5 10 15

Glu Arg Val Thr Met Ser Cys Ser Ala Ser Ser Ser Val Ile Tyr Met
20 25 30

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

Asp Thr Ser Lys Leu Ala Ser Gly Val Pro Ala Arg Phe Ser Gly Ser
50 55 60

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

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

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala

180 185 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
195 200 205

Asn Arg Gly Glu Cys
210

<210> 531
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 531
gagatcgtgc tgacccagtc ccctgccacc ctgtctgcta gccctggcga gcgcgtgaca 60

atgtcctgct ccgcctcctc ctccgtgatc tacatgcact ggtatcagca gaagcccggc 120

caggcccctc ggcggtggat ctacgatacc tccaagctgg cctccggcgt gcccgccaga 180

ttctccggct ctggctctgg caccgactac accctgacca tctccagcat ggaacccgag 240

gacgccgccg tgtactactg ccagcagtgg tcctccaacc ccctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt ccccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 532
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 532
Gly Phe Thr Phe Ser Thr Tyr Ala Met Ser
1   5   10

<210> 533
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 533
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1   5   10   15

Gly

<210> 534
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 534
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1   5   10

<210> 535
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 535
Thr Tyr Ala Met Ser
1   5

<210> 536
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 536
Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val Lys
1 5 10 15

Gly

<210> 537
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 537
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 538
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 538
Gly Phe Thr Phe Ser Thr Tyr
1 5

<210> 539
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 539
Ser Asp Ala Gly Ser Tyr
1 5

<210> 540
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 540
Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1 5 10

<210> 541
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 541
Gly Phe Thr Phe Ser Thr Tyr Ala
1 5

<210> 542
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 542
Ile Ser Asp Ala Gly Ser Tyr Ser
1 5

<210> 543
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 543
Ala Arg Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr
1   5   10   15

<210> 544
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 544
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1   5   10   15

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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
            100   105   110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 545
<211> 366
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 545
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt gcggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctccgacg ccggctccta ctcctactac 180

cccgacaacg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc 300

tccagatacg aagagtacta cgtgatggac tattggggcc agggcaccac cgtgacagtg 360

tcctcc 366

<210> 546
<211> 452
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 546
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

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

```
Ala Thr Ile Ser Asp Ala Gly Ser Tyr Ser Tyr Tyr Pro Asp Asn Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Ser Arg Tyr Glu Glu Tyr Tyr Val Met Asp Tyr Trp
            100                 105                 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro
        115                 120                 125

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

Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr
145                 150                 155                 160

Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro
                165                 170                 175

Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr
            180                 185                 190

Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn
        195                 200                 205

His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser
    210                 215                 220

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
225                 230                 235                 240

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

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser
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```
            260                 265                 270

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
        275                 280                 285

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
    290                 295                 300

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
305                 310                 315                 320

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro
                325                 330                 335

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
            340                 345                 350

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
        355                 360                 365

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
    370                 375                 380

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
385                 390                 395                 400

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
                405                 410                 415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
            420                 425                 430

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
        435                 440                 445

Ser Pro Gly Lys
    450
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<210> 547
<211> 1356
<212> DNA

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 547
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc acctacgcca tgtcctgggt gcggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctccgacg ccggctccta ctcctactac 180

cccgacaacg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc 300

tccagatacg aagagtacta cgtgatggac tattggggcc agggcaccac cgtgacagtg 360

tcctccgcta gcaccaaggg cccaagtgtg tttcccctgg cccccagcag caagtctact 420

tccggcggaa ctgctgccct gggttgcctg gtgaaggact acttccccga gcccgtgaca 480

gtgtcctgga actctggggc tctgacttcc ggcgtgcaca ccttccccgc cgtgctgcag 540

agcagcggcc tgtacagcct gagcagcgtg gtgacagtgc cctccagctc tctgggaacc 600

cagacctata tctgcaacgt gaaccacaag cccagcaaca ccaaggtgga caagagagtg 660

gagcccaaga gctgcgacaa gacccacacc tgccccccct gcccagctcc agaactgctg 720

ggagggcctt ccgtgttcct gttcccccca aagcccaagg acaccctgat gatcagcagg 780

acccccgagg tgacctgcgt ggtggtggcc gtgtcccacg aggacccaga ggtgaagttc 840

aactggtacg tggacggcgt ggaggtgcac aacgccaaga ccaagcccag agaggagcag 900

tacaacagca cctacagggt ggtgtccgtg ctgaccgtgc tgcaccagga ctggctgaac 960

ggcaaagaat acaagtgcaa agtctccaac aaggccctgg ctgccccaat cgaaaagaca 1020

atcagcaagg ccaagggcca gccacgggag ccccaggtgt acaccctgcc ccccagccgg 1080

gaggagatga ccaagaacca ggtgtccctg acctgtctgg tgaagggctt ctaccccagc 1140

gatatcgccg tggagtggga gagcaacggc agcccgaga acaactacaa gaccaccccc 1200

ccagtgctgg acagcgacgg cagcttcttc ctgtacagca agctgaccgt ggacaagtcc 1260

aggtggcagc agggcaacgt gttcagctgc agcgtgatgc acgaggccct gcacaaccac 1320

tacacccaga agtccctgag cctgagcccc ggcaag 1356

<210> 548
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 548
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 549
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 549
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 550
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 550
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 551
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 551
Arg Ala Ser Gln Ser Ile Ser Asn Asn Leu His
1 5 10

<210> 552
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 552
Tyr Ala Ser Gln Ser Ile Ser
1 5

<210> 553
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 553
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 554
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 554
Ser Gln Ser Ile Ser Asn Asn
1 5

<210> 555
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 555
Tyr Ala Ser
1

<210> 556
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 556
Ser Ser Ser Trp Leu
1 5

<210> 557
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 557
Gln Ser Ile Ser Asn Asn
1 5

<210> 558
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 558

Tyr Ala Ser
1

<210> 559
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 559
Gln Gln Ser Ser Ser Trp Leu Thr
1 5

<210> 560
<211> 106
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 560
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 561
<211> 318
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 561
gagatcgtgc tgacccagtc ccctgccacc ctgtccgtgt ctcccggcga gagagtgacc 60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc 120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc 180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc 240

gaggacttcg gcgtgtactt ctgccagcag tcctcatcct ggctgacctt cggccagggc 300

accaagctgg aaatcaag 318

<210> 562
<211> 213
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 562
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro Gly
1 5 10 15

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

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

Lys Tyr Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Ser Ser Trp Leu Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro
100 105 110

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

Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
130 135 140

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

Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser
165 170 175

Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala
180 185 190

Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe
195 200 205

Asn Arg Gly Glu Cys
210

<210> 563
<211> 639
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 563
gagatcgtgc tgacccagtc ccctgccacc ctgtccgtgt ctcccggcga gagagtgacc 60

ctgtcctgcc gggcctccca gtccatctcc aacaacctgc actggtatca gcagaagccc 120

ggccaggccc ctcggctgct gattaagtac gcctcccaga gcatctccgg catccctgcc 180

agattctccg gctccggcag cggcaccgac ttcaccctga ccatctccag cgtggaaccc 240

gaggacttcg gcgtgtactt ctgccagcag tcctcatcct ggctgacctt cggccagggc 300

accaagctgg aaatcaagcg tacggtggcc gctcccagcg tgttcatctt cccccccagc 360

gacgagcagc tgaagagtgg caccgccagc gtggtgtgcc tgctgaacaa cttctacccc 420

cgggaggcca aggtgcagtg gaaggtggac aacgccctgc agagcggcaa cagccaggag 480

agcgtcaccg agcaggacag caaggactcc acctacagcc tgagcagcac cctgaccctg 540

agcaaggccg actacgagaa gcataaggtg tacgcctgcg aggtgaccca ccagggcctg 600

tccagccccg tgaccaagag cttcaacagg ggcgagtgc 639

<210> 564
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 564
Gly Phe Thr Phe Ser Ser Tyr Ala Met Ser
1 5 10

<210> 565
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 565
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 566
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 566
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 567
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 567
Ser Tyr Ala Met Ser
1 5

<210> 568
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 568
Thr Ile Ser Ser Gly Gly Ser Phe Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 569
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 569
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 570
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 570
Gly Phe Thr Phe Ser Ser Tyr
1 5

<210> 571
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 571
Ser Ser Gly Gly Ser Phe
1 5

<210> 572
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 572
Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 573
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 573
Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 574
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 574
Ile Ser Ser Gly Gly Ser Phe Thr
1 5

<210> 575
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 575
Ala Arg Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val
1 5 10

<210> 576
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 576
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 577
<211> 363
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 577
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctcctccg gcggcagctt cacctactac 180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc 300

tccaccgtcg tgggaaccga cttcgatgtg tggggccagg gcaccaccgt gacagtgtcc 360

tcc 363

<210> 578
<211> 451
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 578
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys 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

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

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

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Ala Ser Thr Val Val Gly Thr Asp Phe Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

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

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Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145                 150                 155                 160

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
                165                 170                 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
            180                 185                 190

Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
        195                 200                 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys
    210                 215                 220

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
225                 230                 235                 240

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
                245                 250                 255

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Ala Val Ser His
            260                 265                 270

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
        275                 280                 285

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
    290                 295                 300

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
305                 310                 315                 320

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile
                325                 330                 335

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
            340                 345                 350

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
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        355                 360                 365

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
    370                 375                 380

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
385                 390                 395                 400

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
                405                 410                 415

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
            420                 425                 430

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
        435                 440                 445

Pro Gly Lys
    450
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<210> 579
<211> 1353
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 579
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg 60

tcctgcgccg cctccggctt caccttctcc agctacgcca tgtcctggat ccggcaggct 120

cccggcaagg gcctggaatg ggtggccacc atctcctccg gcggcagctt cacctactac 180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacgggcc 300

tccaccgtcg tgggaaccga cttcgatgtg tggggccagg gcaccaccgt gacagtgtcc 360

tccgctagca ccaagggccc aagtgtgttt cccctggccc ccagcagcaa gtctacttcc 420

ggcggaactg ctgccctggg ttgcctggtg aaggactact tccccgagcc cgtgacagtg 480

tcctggaact ctggggctct gacttccggc gtgcacacct tccccgccgt gctgcagagc 540

agcggcctgt acagcctgag cagcgtggtg acagtgccct ccagctctct gggaacccag 600

acctatatct gcaacgtgaa ccacaagccc agcaacacca aggtggacaa gagagtggag 660

cccaagagct gcgacaagac ccacacctgc ccccccctgcc cagctccaga actgctggga 720

gggccttccg tgttcctgtt ccccccccaag cccaaggaca ccctgatgat cagcaggacc 780

cccgaggtga cctgcgtggt ggtggccgtg tcccacgagg acccagaggt gaagttcaac 840

tggtacgtgg acggcgtgga ggtgcacaac gccaagacca agcccagaga ggagcagtac 900

aacagcacct acagggtggt gtccgtgctg accgtgctgc accaggactg gctgaacggc 960

aaagaataca agtgcaaagt ctccaacaag gccctggctg ccccaatcga aaagacaatc 1020

agcaaggcca agggccagcc acgggagccc caggtgtaca ccctgccccc cagccgggag 1080

gagatgacca agaaccaggt gtccctgacc tgtctggtga agggcttcta ccccagcgat 1140

atcgccgtgg agtgggagag caacggccag cccgagaaca actacaagac cacccccca 1200

gtgctggaca gcgacggcag cttcttcctg tacagcaagc tgaccgtgga caagtccagg 1260

tggcagcagg gcaacgtgtt cagctgcagc gtgatgcacg aggccctgca caaccactac 1320

acccagaagt ccctgagcct gagccccggc aag 1353

<210> 580
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 580
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 581
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 581
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 582
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 582
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 583
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 583
Arg Ala Ser Gln Asp Ile Gly Ser Ser Leu Asn
1 5 10

<210> 584
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 584
Ala Thr Ser Ser Leu Asp Ser
1 5

<210> 585
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 585
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1 5

<210> 586
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 586
Ser Gln Asp Ile Gly Ser Ser
1 5

<210> 587
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 587
Ala Thr Ser
1

<210> 588
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 588

Tyr Ala Ser Ser Pro Pro
1   5

<210> 589
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 589
Gln Asp Ile Gly Ser Ser
1   5

<210> 590
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 590
Ala Thr Ser
1

<210> 591
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      peptide"

<400> 591
Leu Gln Tyr Ala Ser Ser Pro Pro Thr
1   5

<210> 592
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 592
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 593
<211> 321
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 593
gacatccaga tgacccagtc cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctccg gctctagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccccccccac ctttggcgga 300

ggcaccaagc tggaaatcaa g 321

<210> 594
<211> 214
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 594
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

Tyr Ala Thr Ser Ser Leu Asp Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Val Val Tyr Tyr Cys Leu Gln Tyr Ala Ser Ser Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 595
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 595
gacatccaga tgacccagtc cccctccagc ctgtccgcct ccgtgggcga tagagtgacc 60

ctgacctgcc gggcctccca ggacatcggc tcctccctga actggctgca gcagaagccc 120

ggcaaggcca tcaagcggct gatctacgcc acctcctccc tggactccgg cgtgccctcc 180

cggttctccg gctctagatc cggcaccgac tacaccctga ccatctccag cctgcagccc 240

gaggacttcg tggtgtacta ctgcctgcag tacgcctcca gccccccccac ctttggcgga 300

ggcaccaagc tggaaatcaa gcgtacggtg gccgctccca gcgtgttcat cttcccccc 360

agcgacgagc agctgaagag tggcaccgcc agcgtggtgt gcctgctgaa caacttctac 420

ccccgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caacagccag 480

gagagcgtca ccgagcagga cagcaaggac tccacctaca gcctgagcag caccctgacc 540

ctgagcaagg ccgactacga gaagcataag gtgtacgcct gcgaggtgac ccaccagggc 600

ctgtccagcc ccgtgaccaa gagcttcaac aggggcgagt gc 642

<210> 596
<211> 10
<212> PRT

<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 596
Gly Phe Thr Phe Ser Asn Phe Ala Met Ser
1 5 10

<210> 597
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 597
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 598
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 598
Arg Gly Tyr Ser Gly Val Asp Lys
1 5

<210> 599
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 599
Ser Asn Phe Ala Met Ser
1 5

<210> 600
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 600
Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val Lys
1 5 10 15

Gly

<210> 601
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 601
Arg Gly Tyr Ser Gly Val Asp Lys
1 5

<210> 602
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 602
Gly Phe Thr Phe Ser Asn Phe
1 5

<210> 603
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 603
Ser Thr Gly Gly Thr Tyr
1 5

<210> 604
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 604
Arg Gly Tyr Ser Gly Val Asp Lys
1 5

<210> 605
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 605
Gly Phe Thr Phe Ser Asn Phe Ala
1 5

<210> 606
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<221> source

<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 606
Ile Ser Thr Gly Gly Thr Tyr Thr
1 5

<210> 607
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 607
Thr Arg Arg Gly Tyr Ser Gly Val Asp Lys
1 5 10

<210> 608
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polypeptide"

<400> 608
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
20 25 30

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

Ser Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
50 55 60

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

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


Ala Arg Arg Gly Tyr Ser Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
            100                 105                 110


Val Thr Val Ser Ser
        115


<210> 609
<211> 351
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 609
gaggtgcagc tggtggaatc tggcggaggc ctggtgaaac ccggcggatc cctgagactg       60

tcctgcgccg cctccggctt caccttctcc aacttcgcca tgtcctgggt gcggcaggct      120

cccggcaagg gcctggaatg ggtgtccacc atctccaccg gcggcaccta cacctactac      180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac      240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc      300

tactcaggcg tggacaaatg gggccagggc accaccgtga cagtgtcctc c               351


<210> 610
<211> 447
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polypeptide"

<400> 610
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1               5                   10                  15


Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Phe
            20                  25                  30
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Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35                  40                  45

Ser Thr Ile Ser Thr Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
    50                  55                  60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser 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 Arg Gly Tyr Ser Gly Val Asp Lys Trp Gly Gln Gly Thr Thr
            100                 105                 110

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

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
    130                 135                 140

Leu Val Lys Asp Tyr Phe Pro Cys Pro Val Thr Val Ser Trp Asn Ser
145                 150                 155                 160

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
                165                 170                 175

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
            180                 185                 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
        195                 200                 205

Thr Lys Val Asp Lys Arg Val Glu Pro Lys Ser Cys Asp Lys Thr His
    210                 215                 220

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
225                 230                 235                 240

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
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                245                 250                 255

Pro Glu Val Thr Cys Val Val Val Ala Val Ser His Glu Asp Pro Glu
            260                 265                 270

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
        275                 280                 285

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
    290                 295                 300

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
305                 310                 315                 320

Cys Lys Val Ser Asn Lys Ala Leu Ala Ala Pro Ile Glu Lys Thr Ile
                325                 330                 335

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
            340                 345                 350

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
        355                 360                 365

Val Lys Gly Phe Tyr Pro Cys Asp Ile Ala Val Glu Trp Glu Ser Asn
    370                 375                 380

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
385                 390                 395                 400

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
                405                 410                 415

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
            420                 425                 430

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
        435                 440                 445

<210> 611
<211> 1341
<212> DNA
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<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
polynucleotide"

<400> 611
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tcctgcgccg cctccggctt caccttctcc aacttcgcca tgtcctgggt gcggcaggct 120

cccggcaagg gcctggaatg ggtgtccacc atctccaccg gcggcaccta cacctactac 180

cccgacagcg tgaagggcag attcaccatc agccgggaca acgccaagaa ctccctgtac 240

ctgcagatga actccctgcg ggccgaggac accgccgtgt actactgtgc cagacggggc 300

tactcaggcg tggacaaatg gggccagggc accaccgtga cagtgtcctc cgctagcacc 360

aagggcccaa gtgtgtttcc cctggccccc agcagcaagt ctacttccgg cggaactgct 420

gccctgggtt gcctggtgaa ggactacttc ccctgtcccg tgacagtgtc ctggaactct 480

ggggctctga cttccggcgt gcacaccttc cccgccgtgc tgcagagcag cggcctgtac 540

agcctgagca gcgtggtgac agtgccctcc agctctctgg gaacccagac ctatatctgc 600

aacgtgaacc acaagcccag caacaccaag gtggacaaga gagtggagcc caagagctgc 660

gacaagaccc acacctgccc cccctgccca gctccagaac tgctgggagg gccttccgtg 720

ttcctgttcc cccccaagcc caaggacacc ctgatgatca gcaggacccc cgaggtgacc 780

tgcgtggtgg tggccgtgtc ccacgaggac ccagaggtga agttcaactg gtacgtggac 840

ggcgtggagg tgcacaacgc caagaccaag cccagagagg agcagtacaa cagcacctac 900

agggtggtgt ccgtgctgac cgtgctgcac caggactggc tgaacggcaa agaatacaag 960

tgcaaagtct ccaacaaggc cctggctgcc ccaatcgaaa agacaatcag caaggccaag 1020

ggccagccac gggagcccca ggtgtacacc ctgccccccа gccgggagga gatgaccaag 1080

aaccaggtgt ccctgacctg tctggtgaag ggcttctacc cctgtgatat cgccgtggag 1140

tgggagagca acggccagcc cgagaacaac tacaagacca ccccccccagt gctggacagc 1200

gacggcagct tcttcctgta cagcaagctg accgtggaca agtccaggtg gcagcagggc 1260

aacgtgttca gctgcagcgt gatgcacgag gccctgcaca accactacac ccagaagtcc 1320

ctgagcctga gccccggcaa g 1341

<210> 612
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 612
Lys Ser Gly Gln Ser Leu Leu Asp Ser Thr Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 613
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 613
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 614
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 614
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 615
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic

peptide"

<400> 615
Lys Ser Gly Gln Ser Leu Leu Asp Ser Thr Gly Lys Thr Tyr Leu Asn
1 5 10 15

<210> 616
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 616
Leu Val Ser Lys Leu Asp Ser
1 5

<210> 617
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 617
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 618
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 618
Gly Gln Ser Leu Leu Asp Ser Thr Gly Lys Thr Tyr
1 5 10

<210> 619
<211> 3

<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 619
Leu Val Ser
1

<210> 620
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 620
Gly Thr His Phe Pro Gln
1 5

<210> 621
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 621
Gln Ser Leu Leu Asp Ser Thr Gly Lys Thr Tyr
1 5 10

<210> 622
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 622

Leu Val Ser
1

<210> 623
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic peptide"

<400> 623
Trp Gln Gly Thr His Phe Pro Gln Thr
1 5

<210> 624
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 624
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Thr Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly
85 90 95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 625
<211> 336
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polynucleotide"

<400> 625
gacgtggtga tgacccagtc ccccctgtcc ctgcctgtga ccctgggcca gcctgcctcc 60

atctcctgca agtccggcca gtccctgctg gactccactg gcaagaccta cctgaactgg 120

ttcctgcagc ggcctggcca gtcccctcgg cggctgatct acctggtgtc caagctggac 180

agcggcgtgc ccgacagatt ctccggctct ggctccggca ccgacttcac cctgaagatc 240

tcccgggtgg aagccgagga cgtgggcgtg tactactgct ggcagggcac ccacttcccc 300

cagaccttcg gcggaggcac caagctggaa atcaag 336

<210> 626
<211> 219
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic polypeptide"

<400> 626
Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Gly Gln Ser Leu Leu Asp Ser
20 25 30

Thr Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro
50 55 60

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


Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Trp Gln Gly
                85                  90                  95


Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110


Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
        115                 120                 125


Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
    130                 135                 140


Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145                 150                 155                 160


Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
                165                 170                 175


Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
            180                 185                 190


Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
        195                 200                 205


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


<210> 627
<211> 657
<212> DNA
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
      polynucleotide"

<400> 627
gacgtggtga tgacccagtc ccccctgtcc ctgcctgtga ccctgggcca gcctgcctcc       60
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atctcctgca agtccggcca gtccctgctg gactccactg gcaagaccta cctgaactgg 120

ttcctgcagc ggcctggcca gtcccctcgg cggctgatct acctggtgtc caagctggac 180

agcggcgtgc ccgacagatt ctccggctct ggctccggca ccgacttcac cctgaagatc 240

tcccgggtgg aagccgagga cgtgggcgtg tactactgct ggcagggcac ccacttcccc 300

cagaccttcg gcggaggcac caagctggaa atcaagcgta cggtggccgc tcccagcgtg 360

ttcatcttcc cccccagcga cgagcagctg aagagtggca ccgccagcgt ggtgtgcctg 420

ctgaacaact tctacccccg ggaggccaag gtgcagtgga aggtggacaa cgccctgcag 480

agcggcaaca gccaggagag cgtcaccgag caggacagca aggactccac ctacagcctg 540

agcagcaccc tgaccctgag caaggccgac tacgagaagc ataaggtgta cgcctgcgag 600

gtgacccacc agggcctgtc cagccccgtg accaagagct tcaacagggg cgagtgc 657

<210> 628
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
6xHis tag"

<400> 628
His His His His His His
1 5

<210> 629
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<221> source
<223> /note="Description of Artificial Sequence: Synthetic
peptide"

<400> 629
Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Leu Tyr Arg Ser Pro
1 5 10 15

Ala Met Pro Glu Asn Leu
20