SEQUENCE LISTING

<110> VOYAGER THERAPEUTICS, INC.

<120> AADC POLYNUCLEOTIDES FOR THE TREATMENT OF PARKINSON'S DISEASE

<130> 2057.1010PCT

<140> PCT/US2015/XXXXXX
<141> 2015-11-05

<150> 62/243,537
<151> 2015-10-19

<150> 62/199,578
<151> 2015-07-31

<150> 62/155,692
<151> 2015-05-01

<150> 62/075,298
<151> 2014-11-05

<160> 23

<170> PatentIn version 3.5

<210> 1
<211> 480
<212> PRT
<213> Homo sapiens

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

Val Ala Asn Tyr Met Glu Gly Ile Glu Gly Arg Gln Val Tyr Pro Asp
            20 25 30

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

Glu Pro Asp Thr Phe Glu Asp Ile Ile Asn Asp Val Glu Lys Ile Ile
    50 55 60

Met Pro Gly Val Thr His Trp His Ser Pro Tyr Phe Phe Ala Tyr Phe

```
65                  70                  75                  80

Pro Thr Ala Ser Ser Tyr Pro Ala Met Leu Ala Asp Met Leu Cys Gly
                85                  90                  95

Ala Ile Gly Cys Ile Gly Phe Ser Trp Ala Ala Ser Pro Ala Cys Thr
            100                 105                 110

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

Pro Lys Ala Phe Leu Asn Glu Lys Ala Gly Glu Gly Gly Gly Val Ile
    130                 135                 140

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

Thr Lys Val Ile His Arg Leu Gln Ala Ala Ser Pro Glu Leu Thr Gln
                165                 170                 175

Ala Ala Ile Met Glu Lys Leu Val Ala Tyr Ser Ser Asp Gln Ala His
            180                 185                 190

Ser Ser Val Glu Arg Ala Gly Leu Ile Gly Gly Val Lys Leu Lys Ala
        195                 200                 205

Ile Pro Ser Asp Gly Asn Phe Ala Met Arg Ala Ser Ala Leu Gln Glu
    210                 215                 220

Ala Leu Glu Arg Asp Lys Ala Ala Gly Leu Ile Pro Phe Phe Met Val
225                 230                 235                 240

Ala Thr Leu Gly Thr Thr Thr Cys Cys Ser Phe Asp Asn Leu Leu Glu
                245                 250                 255

Val Gly Pro Ile Cys Asn Lys Glu Asp Ile Trp Leu His Val Asp Ala
            260                 265                 270
```

```
Ala Tyr Ala Gly Ser Ala Phe Ile Cys Pro Glu Phe Arg His Leu Leu
        275                 280                 285

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

Leu Leu Val Asn Phe Asp Cys Ser Ala Met Trp Val Lys Lys Arg Thr
305                 310                 315                 320

Asp Leu Thr Gly Ala Phe Arg Leu Asp Pro Thr Tyr Leu Lys His Ser
                325                 330                 335

His Gln Asp Ser Gly Leu Ile Thr Asp Tyr Arg His Trp Gln Ile Pro
            340                 345                 350

Leu Gly Arg Arg Phe Arg Ser Leu Lys Met Trp Phe Val Phe Arg Met
        355                 360                 365

Tyr Gly Val Lys Gly Leu Gln Ala Tyr Ile Arg Lys His Val Gln Leu
    370                 375                 380

Ser His Glu Phe Glu Ser Leu Val Arg Gln Asp Pro Arg Phe Glu Ile
385                 390                 395                 400

Cys Val Glu Val Ile Leu Gly Leu Val Cys Phe Arg Leu Lys Gly Ser
                405                 410                 415

Asn Lys Val Asn Glu Ala Leu Leu Gln Arg Ile Asn Ser Ala Lys Lys
            420                 425                 430

Ile His Leu Val Pro Cys His Leu Arg Asp Lys Phe Val Leu Arg Phe
        435                 440                 445

Ala Ile Cys Ser Arg Thr Val Glu Ser Ala His Val Gln Arg Ala Trp
    450                 455                 460

Glu His Ile Lys Glu Leu Ala Ala Asp Val Leu Arg Ala Glu Arg Glu
```

465 470 475 480

<210> 2
<211> 8150
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 2
cattcgccat tcaggctgca ataaagcgtt gatattcagt caattacaaa cattaataac 60

gaagagatga cagaaaaatt ttcattctgt gacagagaaa aagtagccga agatgacggt 120

ttgtcacatg gagttggcag gatgtttgat taaaaacata acaggaagaa aaatgccccg 180

ctgtgggcgg acaaaatagt tgggaactgg gaggggtgga aatggagttt ttaaggatta 240

tttagggaag agtgacaaaa tagatgggaa ctgggtgtag cgtcgtaagc taatacgaaa 300

attaaaaatg acaaaatagt ttggaactag atttcactta tctggttcgg atctcctagg 360

cgatatcagt gatcagatcc agacatgata agatacattg atgagtttgg acaaaccaca 420

actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat tgctttattt 480

gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt 540

caggttcagg gggaggtgtg ggaggttttt taaagcaagt aaaacctcta caaatgtggt 600

atggctgatt atgatcctct agtacttctc gacaagctta cattattgaa gcatttatca 660

gggttattgt ctcagacctg caggcagctg cgcgctcgct cgctcactga ggccgcccgg 720

gcaaagcccg ggcgtcgggc gacctttggt cgcccggcct cagtgagcga gcgagcgcgc 780

agagagggag tggccaactc catcactagg ggttccttgt agttaatgat taacccgcca 840

tgctacttat ctacgtagcc atgctctaga gcggccgcac gcgtggagct agttattaat 900

agtaatcaat tacggggtca ttagttcata gcccatatat ggagttccgc gttacataac 960

ttacggtaaa tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa 1020

tgacgtatgt tcccatagta acgtcaatag ggactttcca ttgacgtcaa tgggtggagt 1080

atttacggta aactgcccac ttggcagtac atcaagtgta tcatatgcca agtacgcccc 1140

ctattgacgt caatgacggt aaatggcccg cctggcatta tgcccagtac atgaccttat 1200

gggactttcc tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc 1260

ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga tttccaagtc 1320

tccaccccat tgacgtcaat gggagtttgt tttgcaccaa aatcaacggg actttccaaa 1380

atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac ggtgggaggt 1440

ctatataagc agagctcgtt tagtgaaccg tcagatcgcc tggagacgcc atccacgctg 1500

ttttgacctc catagaagac accgggaccg atccagcctc cgcggattcg aatcccggcc 1560

gggaacggtg cattggaacg cggattcccc gtgccaagag tgacgtaagt accgcctata 1620

gagtctatag gcccacaaaa aatgctttct tcttttaata tacttttttg tttatcttat 1680

ttctaatact ttccctaatc tctttctttc agggcaataa tgatacaatg tatcatgcct 1740

ctttgcacca ttctaaagaa taacagtgat aatttctggg ttaaggcaat agcaatattt 1800

ctgcatataa atatttctgc atataaattg taactgatgt aagaggtttc atattgctaa 1860

tagcagctac aatccagcta ccattctgct tttattttat ggttgggata aggctggatt 1920

attctgagtc caagctaggc ccttttgcta atcatgttca tacctcttat cttcctccca 1980

cagctcctgg gcaacgtgct ggtctgtgtg ctggcccatc actttggcaa agaattggga 2040

ttcgaacatc ggccgccacc atgaacgcaa gtgaattccg aaggagaggg aaggagatgg 2100

tggattacgt ggccaactac atggaaggca ttgagggacg ccaggtctac cctgacgtgg 2160

agcccgggta cctgcggccg ctgatccctg ccgctgcccc tcaggagcca gacacgtttg 2220

aggacatcat caacgacgtt gagaagataa tcatgcctgg ggtgacgcac tggcacagcc 2280

cctacttctt cgcctacttc cccactgcca gctcgtaccc ggccatgctt gcggacatgc 2340

tgtgcggggc cattggctgc atcggcttct cctgggcggc aagcccagca tgcacagagc 2400

tggagactgt gatgatggac tggctcggga agatgctgga actaccaaag gcatttttga 2460

atgagaaagc tggagaaggg ggaggagtga tccagggaag tgccagtgaa gccaccctgg 2520

tggccctgct ggccgctcgg accaaagtga tccatcggct gcaggcagcg tccccagagc 2580

tcacacaggc cgctatcatg gagaagctgg tggcttactc atccgatcag gcacactcct 2640

cagtggaaag agctgggtta attggtggag tgaaattaaa agccatcccc tcagatggca 2700

acttcgccat gcgtgcgtct gccctgcagg aagccctgga gagagacaaa gcggctggcc 2760

tgattccttt ctttatggtt gccaccctgg ggaccacaac atgctgctcc tttgacaatc 2820

tcttagaagt cggtcctatc tgcaacaagg aagacatatg gctgcacgtt gatgcagcct 2880

acgcaggcag tgcattcatc tgccctgagt tccggcacct tctgaatgga gtggagtttg 2940

cagattcatt caactttaat ccccacaaat ggctattggt gaattttgac tgttctgcca 3000

tgtgggtgaa aaagagaaca gacttaacgg gagcctttag actggacccc acttacctga 3060

agcacagcca tcaggattca gggcttatca ctgactaccg gcattggcag ataccactgg 3120

gcagaagatt tcgctctttg aaaatgtggt ttgtatttag gatgtatgga gtcaaaggac 3180

tgcaggctta tatccgcaag catgtccagc tgtcccatga gtttgagtca ctggtgcgcc 3240

aggatccccg ctttgaaatc tgtgtggaag tcattctggg gcttgtctgc tttcggctaa 3300

agggttccaa caaagtgaat gaagctcttc tgcaaagaat aaacagtgcc aaaaaaatcc 3360

acttggttcc atgtcacctc agggacaagt ttgtcctgcg ctttgccatc tgttctcgca 3420

cggtggaatc tgcccatgtg cagcgggcct gggaacacat caaagagctg gcggccgacg 3480

tgctgcgagc agagagggag taggagtgag ctgctcgaga gatctacggg tggcatccct 3540

gtgacccctc cccagtgcct ctcctggccc tggaagttgc cactccagtg cccaccagcc 3600

ttgtcctaat aaaattaagt tgcatcattt tgtctgacta ggtgtccttc tataatatta 3660

tggggtggag gggggtggta tggagcaagg ggcaagttgg gaagacaacc tgtagggcct 3720

gcggggtcta ttgggaacca agctggagtg cagtggcaca atcttggctc actgcaatct 3780

ccgcctcctg ggttcaagcg attctcctgc ctcagcctcc cgagttgttg ggattccagg 3840

catgcatgac caggctcagc taatttttgt ttttttggta gagacggggt ttcaccatat 3900

tggccaggct ggtctccaac tcctaatctc aggtgatcta cccaccttgg cctcccaaat 3960

tgctgggatt acaggcgtga accactgctc ccttccctgt ccttctgatt ttgtaggtaa 4020

ccccggacca cgtgcggacc gagcggccgc tctagagcat ggctacgtag ataagtagca 4080

tggcgggtta atcattaact acaaggaacc cctagtgatg gagttggcca ctccctctct 4140

gcgcgctcgc tcgctcactg aggccgggcg accaaaggtc gcccgacgcc cgggcggcct 4200

cagtgagcga gcgagcgcgc agctgcctgc aggtctgaga caataaccct gataaatgct 4260

tcaataatgt agccaaccac tagaactata gctagagtcc tgggcgaaca aacgatgctc 4320

gccttccaga aaaccgagga tgcgaaccac ttcatccggg gtcagcacca ccggcaagcg 4380

ccgcgacggc cgaggtcttc cgatctcctg aagccagggc agatccgtgc acagcacctt 4440

gccgtagaag aacagcaagg ccgccaatgc ctgacgatgc gtggagaccg aaaccttgcg 4500

ctcgttcgcc agccaggaca gaaatgcctc gacttcgctg ctgcccaagg ttgccgggtg 4560

acgcacaccg tggaaacgga tgaaggcacg aacccagttg acataagcct gttcggttcg 4620

taaactgtaa tgcaagtagc gtatgcgctc acgcaactgg tccagaacct tgaccgaacg 4680

cagcggtggt aacggcgcag tggcggtttt catggcttgt tatgactgtt tttttgtaca 4740

gtctatgcct cgggcatcca agcagcaagc gcgttacgcc gtgggtcgat gtttgatgtt 4800

atggagcagc aacgatgtta cgcagcagca acgatgttac gcagcagggc agtcgcccta 4860

aaacaaagtt aggtggctca agtatgggca tcattcgcac atgtaggctc ggccctgacc 4920

aagtcaaatc catgcgggct gctcttgatc ttttcggtcg tgagttcgga gacgtagcca 4980

cctactccca acatcagccg gactccgatt acctcgggaa cttgctccgt agtaagacat 5040

tcatcgcgct tgctgccttc gaccaagaag cggttgttgg cgctctcgcg gcttacgttc 5100

tgcccaagtt tgagcagccg cgtagtgaga tctatatcta tgatctcgca gtctccggcg 5160

agcaccggag gcagggcatt gccaccgcgc tcatcaatct cctcaagcat gaggccaacg 5220

cgcttggtgc ttatgtgatc tacgtgcaag cagattacgg tgacgatccc gcagtggctc 5280

tctatacaaa gttgggcata cgggaagaag tgatgcactt tgatatcgac ccaagtaccg 5340

ccacctaaca attcgttcaa gccgagatcg gcttcccggc cgcggagttg ttcggtaaat 5400

tgtcacaacg ccgcgaatat agtctttacc atgcccttgg ccacgcccct ctttaatacg 5460

acgggcaatt tgcacttcag aaaatgaaga gtttgcttta gccataacaa aagtccagta 5520

tgctttttca cagcataact ggactgattt cagtttacaa ctattctgtc tagtttaaga 5580

ctttattgtc atagtttaga tctattttgt tcagtttaag actttattgt ccgcccacac 5640

ccgcttacgc agggcatcca tttattactc aaccgtaacc gattttgcca ggttacgcgg 5700

ctggtctatg cggtgtgaaa taccgcacag atgcgtaagg agaaaatacc gcatcaggcg 5760

ctcttccgct tcctcgctca ctgactcgct gcgctcggtc gttcggctgc ggcgagcggt 5820

atcagctcac tcaaaggcgg taatacggtt atccacagaa tcaggggata acgcaggaaa 5880

gaacatgtga gcaaaaggcc agcaaaaggc caggaaccgt aaaaaggccg cgttgctggc 5940

gtttttccat aggctccgcc cccctgacga gcatcacaaa aatcgacgct caagtcagag 6000

gtggcgaaac ccgacaggac tataaagata ccaggcgttt ccccctggaa gctccctcgt 6060

gcgctctcct gttccgaccc tgccgcttac cggatacctg tccgcctttc tcccttcggg 6120

aagcgtggcg ctttctcata gctcacgctg taggtatctc agttcggtgt aggtcgttcg 6180

ctccaagctg ggctgtgtgc acgaaccccc cgttcagccc gaccgctgcg ccttatccgg 6240

taactatcgt cttgagtcca acccggtaag acacgactta tcgccactgg cagcagccac 6300

tggtaacagg attagcagag cgaggtatgt aggcggtgct acagagttct tgaagtggtg 6360

gcctaactac ggctacacta gaagaacagt atttggtatc tgcgctctgc tgaagccagt 6420

taccttcgga aaaagagttg gtagctcttg atccggcaaa caaaccaccg ctggtagcgg 6480

tggtttttt gtttgcaagc agcagattac gcgcagaaaa aaaggatctc aagaagatcc 6540

tttgatcttt tctacggggt ctgacgctca gtggaacgaa aactcacgtt aagggatttt 6600

ggtcatgaga ttatcaaaaa ggatcttcac ctagatcctt ttaaattaaa aatgaagttt 6660

taaatcaatc taaagtatat atgagtaaac ttggtctgac agttaccaat gcttaatcag 6720

tgaggcacct atctcagcga tctgtctatt tcgttcatcc atagttgcct gactccccgt 6780

cgtgtagata actacgatac gggagggctt accatctggc cccagtgctg caatgatacc 6840

gcgagaccca cgctcaccgg ctccagattt atcagcaata aaccagccag ccggaagggc 6900

cgagcgcaga agtggtcctg caactttatc cgcctccatc cagtctatta attgttgccg 6960

ggaagctaga gtaagtagtt cgccagttaa tagtttgcgc aacgttgttg ccattgctac 7020

aggcatcgtg gtgtcacgct cgtcgtttgg tatggcttca ttcagctccg gttcccaacg 7080

atcaaggcga gttacatgat cccccatgtt gtgcaaaaaa gcggttagct ccttcggtcc 7140

tccgatcgtt gtcagaagta agttggccgc agtgttatca ctcatggtta tggcagcact 7200

gcataattct cttactgtca tgccatccgt aagatgcttt tctgtgactg gtgagtactc 7260

aaccaagtca ttctgagaat agtgtatgcg gcgaccgagt tgctcttgcc cggcgtcaat 7320

acgggataat accgcgccac atagcagaac tttaaaagtg ctcatcattg gaaaacgttc 7380

ttcggggcga aaactctcaa ggatcttacc gctgttgaga tccagttcga tgtaacccac 7440

tcgtgcaccc aactgatctt cagcatcttt tactttcacc agcgtttctg ggtgagcaaa 7500

aacaggaagg caaaatgccg caaaaaaggg aataagggcg acacggaaat gttgaatact 7560

catactcttc ctttttcaat attattgaag catttatcag ggttattgtc tcatgagcgg 7620

atacatattt gaatgtattt agaaaaataa acaaataggg gttccgcgca catttccccg 7680

aaaagtgcca cctaaattgt aagcgttaat attttgttaa aattcgcgtt aaatttttgt 7740

taaatcagct catttttaa ccaataggcc gaaatcggca aaatccctta taaatcaaaa 7800

gaatagaccg agatagggtt gagtgttgtt ccagtttgga acaagagtcc actattaaag 7860

aacgtggact ccaacgtcaa agggcgaaaa accgtctatc agggcgatgg cccactacgt 7920

gaaccatcac cctaatcaag ttttttgggg tcgaggtgcc gtaaagcact aaatcggaac 7980

cctaaaggga gcccccgatt tagagcttga cggggaaagc cggcgaacgt ggcgagaaag 8040

gaagggaaga aagcgaaagg agcgggcgct agggcgctgg caagtgtagc ggtcacgctg 8100

cgcgtaacca ccacacccgc cgcgcttaat gcgccgctac agggcgcgtc 8150

<210> 3
<211> 8149
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 3
cattcgccat tcaggctgca ataagcgtt gatattcagt caattacaaa cattaataac 60

gaagagatga cagaaaaatt ttcattctgt gacagagaaa aagtagccga agatgacggt 120

ttgtcacatg gagttggcag gatgtttgat taaaaacata acaggaagaa aaatgccccg 180

ctgtgggcgg acaaaatagt tgggaactgg gaggggtgga aatggagttt ttaaggatta 240

tttagggaag agtgacaaaa tagatgggaa ctgggtgtag cgtcgtaagc taatacgaaa 300

attaaaaatg acaaaatagt ttggaactag atttcactta tctggttcgg atctcctagg 360

cgatatcagt gatcagatcc agacatgata agatacattg atgagtttgg acaaaccaca 420

actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat tgctttattt 480

gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt 540

caggttcagg gggaggtgtg ggaggttttt taaagcaagt aaaacctcta caaatgtggt 600

atggctgatt atgatcctct agtacttctc gacaagctta cattattgaa gcatttatca 660

gggttattgt ctcagacctg caggcagctg cgcgctcgct cgctcactga ggccgcccgg 720

gcaaagcccg ggcgtcgggc gacctttggt cgcccggcct cagtgagcga gcgagcgcgc 780

agagagggag tggccaactc catcactagg ggttccttgt agttaatgat taacccgcca 840

tgctacttat ctacgtagcc atgctctaga gcggccgcac gcgtggagct agttattaat 900

agtaatcaat tacggggtca ttagttcata gcccatatat ggagttccgc gttacataac 960

ttacggtaaa tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa 1020

tgacgtatgt tcccatagta acgtcaatag ggactttcca ttgacgtcaa tgggtggagt 1080

atttacggta aactgcccac ttggcagtac atcaagtgta tcatatgcca agtacgcccc 1140

ctattgacgt caatgacggt aaatggcccg cctggcatta tgcccagtac atgaccttat 1200

gggactttcc tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc 1260

ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga tttccaagtc 1320

tccaccccat tgacgtcaat gggagtttgt tttgcaccaa aatcaacggg actttccaaa 1380

atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac ggtgggaggt 1440

ctatataagc agagctcgtt tagtgaaccg tcagatcgcc tggagacgcc atccacgctg 1500

ttttgacctc catagaagac accgggaccg atccagcctc cgcggattcg aatcccggcc 1560

gggaacggtg cattggaacg cggattcccc gtgccaagag tgacgtaagt accgcctata 1620

gagtctatag gcccacaaaa aatgctttct tcttttaata tacttttttg tttatcttat 1680

ttctaatact ttccctaatc tctttctttc agggcaataa tgatacaatg tatcatgcct 1740

ctttgcacca ttctaaagaa taacagtgat aatttctggg ttaaggcaat agcaatattt 1800

ctgcatataa atatttctgc atataaattg taactgatgt aagaggtttc atattgctaa 1860

tagcagctac aatccagcta ccattctgct tttattttat ggttgggata aggctggatt 1920

attctgagtc caagctaggc ccttttgcta atcatgttca tacctcttat cttcctccca 1980

cagctcctgg gcaacgtgct ggtctgtgtg ctggcccatc actttggcaa agaattggga 2040

ttcgaacatc ggccgccacc atgaacgcca gcgagttcag gaggaggggc aaggagatgg 2100

tggactacgt ggccaactac atggagggca tcgagggcag gcaggtgtac cccgacgtgg 2160

agcccggcta cctgaggccc ctgatccccg ccgccgcccc ccaggagccc gacaccttcg 2220

aggacatcat caacgacgtg gagaagatca tcatgcccgg cgtgacccac tggcacagcc 2280

cctacttctt cgcctacttc cccaccgcca gcagctaccc cgccatgctg gccgacatgc 2340

tgtgcggcgc catcggctgc atcggcttca gctgggccgc cagccccgcc tgcaccgagc 2400

tggagaccgt gatgatggac tggctgggca agatgctgga gctgcccaag gccttcctga 2460

acgagaaggc cggcgagggc ggcggcgtga tccagggcag cgccagcgag gccaccctgg 2520

tggccctgct ggccgccagg accaaggtga tccacaggct gcaggccgcc agccccgagc 2580

tgacccaggc cgccatcatg gagaagctgg tggcctacag cagcgaccag gcccacagca 2640

gcgtggagag ggccggcctg atcggcggcg tgaagctgaa ggccatcccc agcgacggca 2700

acttcgccat gagggccagc gccctgcagg aggccctgga gagggacaag gccgccggcc 2760

tgatcccctt cttcatggtg gccaccctgg gcaccaccac ctgctgcagc ttcgacaacc 2820

tgctggaggt gggccccatc tgcaacaagg aggacatctg gctgcacgtg gacgccgcct 2880

acgccggcag cgccttcatc tgccccgagt tcaggcacct gctgaacggc gtggagttcg 2940

ccgacagctt caacttcaac ccccacaagt ggctgctggt gaacttcgac tgcagcgcca 3000

tgtgggtgaa gaagaggacc gacctgaccg gcgccttcag gctggacccc acctacctga 3060

agcacagcca ccaggacagc ggcctgatca ccgactacag gcactggcag atccccctgg 3120

gcaggaggtt caggagcctg aagatgtggt tcgtgttcag gatgtacggc gtgaagggcc 3180

tgcaggccta catcaggaag cacgtgcagc tgagccacga gttcgagagc ctggtgaggc 3240

aggaccccag gttcgagatc tgcgtggagg tgatcctggg cctggtgtgc ttcaggctga 3300

agggcagcaa caaggtgaac gaggccctgc tgcagaggat caacagcgcc aagaagatcc 3360

acctggtgcc ctgccacctg agggacaagt tcgtgctgag gttcgccatc tgcagcagga 3420

ccgtggagag cgcccacgtg cagagggcct gggagcacat caaggagctg gccgccgacg 3480

tgctgagggc cgagagggag tgagctgctc gagagatcta cgggtggcat ccctgtgacc 3540

cctccccagt gcctctcctg gccctggaag ttgccactcc agtgcccacc agccttgtcc 3600

taataaaatt aagttgcatc attttgtctg actaggtgtc cttctataat attatggggt 3660

ggaggggggt ggtatggagc aaggggcaag ttgggaagac aacctgtagg gcctgcgggg 3720

tctattggga accaagctgg agtgcagtgg cacaatcttg gctcactgca atctccgcct 3780

cctgggttca agcgattctc ctgcctcagc ctcccgagtt gttgggattc caggcatgca 3840

tgaccaggct cagctaattt ttgtttttt ggtagagacg gggtttcacc atattggcca 3900

ggctggtctc caactcctaa tctcaggtga tctacccacc ttggcctccc aaattgctgg 3960

gattacaggc gtgaaccact gctcccttcc ctgtccttct gattttgtag gtaacgtaac 4020

cccggaccac gtgcggaccg agcggccgct ctagagcatg gctacgtaga taagtagcat 4080

ggcgggttaa tcattaacta caaggaaccc ctagtgatgg agttggccac tccctctctg 4140

cgcgctcgct cgctcactga ggccgggcga ccaaaggtcg cccgacgccc gggcggcctc 4200

agtgagcgag cgagcgcgca gctgcctgca ggtctgagac aataaccctg ataaatgctt 4260

caataatgta gccaaccact agaactatag ctagagtcct gggcgaacaa acgatgctcg 4320

ccttccagaa aaccgaggat gcgaaccact tcatccgggg tcagcaccac cggcaagcgc 4380

cgcgacggcc gaggtcttcc gatctcctga agccagggca gatccgtgca cagcaccttg 4440

ccgtagaaga acagcaaggc cgccaatgcc tgacgatgcg tggagaccga aaccttgcgc 4500

tcgttcgcca gccaggacag aaatgcctcg acttcgctgc tgcccaaggt tgccgggtga 4560

cgcacaccgt ggaaacggat gaaggcacga acccagttga cataagcctg ttcggttcgt 4620

aaactgtaat gcaagtagcg tatgcgctca cgcaactggt ccagaacctt gaccgaacgc 4680

agcggtggta acggcgcagt ggcggttttc atggcttgtt atgactgttt ttttgtacag 4740

tctatgcctc gggcatccaa gcagcaagcg cgttacgccg tgggtcgatg tttgatgtta 4800

tggagcagca acgatgttac gcagcagcaa cgatgttacg cagcagggca gtcgccctaa 4860

aacaaagtta ggtggctcaa gtatgggcat cattcgcaca tgtaggctcg gccctgacca 4920

agtcaaatcc atgcgggctg ctcttgatct tttcggtcgt gagttcggag acgtagccac 4980

ctactcccaa catcagccgg actccgatta cctcgggaac ttgctccgta gtaagacatt 5040

catcgcgctt gctgccttcg accaagaagc ggttgttggc gctctcgcgg cttacgttct 5100

gcccaagttt gagcagccgc gtagtgagat ctatatctat gatctcgcag tctccggcga 5160

gcaccggagg cagggcattg ccaccgcgct catcaatctc ctcaagcatg aggccaacgc 5220

gcttggtgct tatgtgatct acgtgcaagc agattacggt gacgatcccg cagtggctct 5280

ctatacaaag ttgggcatac gggaagaagt gatgcacttt gatatcgacc caagtaccgc 5340

cacctaacaa ttcgttcaag ccgagatcgg cttcccggcc gcggagttgt tcggtaaatt 5400

gtcacaacgc cgcgaatata gtctttacca tgcccttggc cacgcccctc tttaatacga 5460

cgggcaattt gcacttcaga aaatgaagag tttgctttag ccataacaaa agtccagtat 5520

gctttttcac agcataactg gactgatttc agtttacaac tattctgtct agtttaagac 5580

tttattgtca tagtttagat ctattttgtt cagtttaaga ctttattgtc cgcccacacc 5640

cgcttacgca gggcatccat ttattactca accgtaaccg attttgccag gttacgcggc 5700

tggtctatgc ggtgtgaaat accgcacaga tgcgtaagga gaaaataccg catcaggcgc 5760

tcttccgctt cctcgctcac tgactcgctg cgctcggtcg ttcggctgcg gcgagcggta 5820

tcagctcact caaaggcggt aatacggtta tccacagaat caggggataa cgcaggaaag 5880

aacatgtgag caaaaggcca gcaaaaggcc aggaaccgta aaaaggccgc gttgctggcg 5940

tttttccata ggctccgccc ccctgacgag catcacaaaa atcgacgctc aagtcagagg 6000

tggcgaaacc cgacaggact ataaagatac caggcgtttc cccctggaag ctccctcgtg 6060

cgctctcctg ttccgaccct gccgcttacc ggatacctgt ccgcctttct cccttcggga 6120

agcgtggcgc tttctcatag ctcacgctgt aggtatctca gttcggtgta ggtcgttcgc 6180

tccaagctgg gctgtgtgca cgaacccccc gttcagcccg accgctgcgc cttatccggt 6240

aactatcgtc ttgagtccaa cccggtaaga cacgacttat cgccactggc agcagccact 6300

ggtaacagga ttagcagagc gaggtatgta ggcggtgcta cagagttctt gaagtggtgg 6360

cctaactacg gctacactag aagaacagta tttggtatct gcgctctgct gaagccagtt 6420

accttcggaa aaagagttgg tagctcttga tccggcaaac aaaccaccgc tggtagcggt 6480

ggtttttttg tttgcaagca gcagattacg cgcagaaaaa aaggatctca agaagatcct 6540

ttgatctttt ctacggggtc tgacgctcag tggaacgaaa actcacgtta agggattttg 6600

gtcatgagat tatcaaaaag gatcttcacc tagatccttt taaattaaaa atgaagtttt 6660

aaatcaatct aaagtatata tgagtaaact tggtctgaca gttaccaatg cttaatcagt 6720

gaggcaccta tctcagcgat ctgtctattt cgttcatcca tagttgcctg actccccgtc 6780

gtgtagataa ctacgatacg ggagggctta ccatctggcc ccagtgctgc aatgataccg 6840

cgagacccac gctcaccggc tccagattta tcagcaataa accagccagc cggaagggcc 6900

gagcgcagaa gtggtcctgc aactttatcc gcctccatcc agtctattaa ttgttgccgg 6960

gaagctagag taagtagttc gccagttaat agtttgcgca acgttgttgc cattgctaca 7020

ggcatcgtgg tgtcacgctc gtcgtttggt atggcttcat tcagctccgg ttcccaacga 7080

tcaaggcgag ttacatgatc ccccatgttg tgcaaaaaag cggttagctc cttcggtcct 7140

ccgatcgttg tcagaagtaa gttggccgca gtgttatcac tcatggttat ggcagcactg 7200

cataattctc ttactgtcat gccatccgta agatgctttt ctgtgactgg tgagtactca 7260

accaagtcat tctgagaata gtgtatgcgg cgaccgagtt gctcttgccc ggcgtcaata 7320

cgggataata ccgcgccaca tagcagaact ttaaaagtgc tcatcattgg aaaacgttct 7380

tcggggcgaa aactctcaag gatcttaccg ctgttgagat ccagttcgat gtaacccact 7440

cgtgcaccca actgatcttc agcatctttt actttcacca gcgtttctgg gtgagcaaaa 7500

acaggaaggc aaaatgccgc aaaaaaggga ataagggcga cacggaaatg ttgaatactc 7560

atactcttcc tttttcaata ttattgaagc atttatcagg gttattgtct catgagcgga 7620

tacatatttg aatgtattta gaaaaataaa caaatagggg ttccgcgcac atttccccga 7680

aaagtgccac ctaaattgta agcgttaata ttttgttaaa attcgcgtta aatttttgtt 7740

aaatcagctc atttttaac caataggccg aaatcggcaa aatcccttat aaatcaaaag 7800

aatagaccga gatagggttg agtgttgttc agtttggaa caagagtcca ctattaaaga 7860

acgtggactc caacgtcaaa gggcgaaaaa ccgtctatca gggcgatggc ccactacgtg 7920

aaccatcacc ctaatcaagt tttttggggt cgaggtgccg taaagcacta aatcggaacc 7980

ctaaagggag cccccgattt agagcttgac ggggaaagcc ggcgaacgtg gcgagaaagg 8040

aagggaagaa agcgaaagga gcgggcgcta gggcgctggc aagtgtagcg gtcacgctgc 8100

gcgtaaccac cacacccgcc gcgcttaatg cgccgctaca gggcgcgtc 8149

<210> 4
<211> 8555
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 4
cattcgccat tcaggctgca ataagcgtt gatattcagt caattacaaa cattaataac 60

gaagagatga cagaaaaatt ttcattctgt gacagagaaa aagtagccga agatgacggt 120

ttgtcacatg gagttggcag gatgtttgat taaaaacata acaggaagaa aaatgccccg 180

ctgtgggcgg acaaaatagt tgggaactgg gaggggtgga aatggagttt ttaaggatta 240

tttagggaag agtgacaaaa tagatgggaa ctgggtgtag cgtcgtaagc taatacgaaa 300

attaaaaatg acaaaatagt ttggaactag atttcactta tctggttcgg atctcctagg 360

cgatatcagt gatcagatcc agacatgata agatacattg atgagtttgg acaaaccaca 420

actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat tgctttattt 480

gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt 540

caggttcagg gggaggtgtg ggaggttttt taaagcaagt aaaacctcta caaatgtggt 600

atggctgatt atgatcctct agtacttctc gacaagctta cattattgaa gcatttatca 660

gggttattgt ctcagacctg caggcagctg cgcgctcgct cgctcactga ggccgcccgg 720

gcaaagcccg ggcgtcgggc gacctttggt cgcccggcct cagtgagcga gcgagcgcgc 780

agagagggag tggccaactc catcactagg ggttccttgt agttaatgat taacccgcca 840

tgctacttat ctacgtagcc atgctctaga gcggccgcac gcgtggagct agttattaat 900

agtaatcaat tacggggtca ttagttcata gcccatatat ggagttccgc gttacataac 960

ttacggtaaa tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa 1020

tgacgtatgt tcccatagta acgtcaatag ggactttcca ttgacgtcaa tgggtggagt 1080

atttacggta aactgcccac ttggcagtac atcaagtgta tcatatgcca agtacgcccc 1140

ctattgacgt caatgacggt aaatggcccg cctggcatta tgcccagtac atgaccttat 1200

gggactttcc tacttggcag tacatctacg tattagtcat cgctattacc atggtgatgc 1260

ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga tttccaagtc 1320

tccaccccat tgacgtcaat gggagtttgt tttgcaccaa aatcaacggg actttccaaa 1380

atgtcgtaac aactccgccc cattgacgca aatgggcggt aggcgtgtac ggtgggaggt 1440

ctatataagc agagctcgtt tagtgaaccg tcagatcgcc tggagacgcc atccacgctg 1500

ttttgacctc catagaagac accgggaccg atccagcctc cgcggattcg aatcccggcc 1560

gggaacggtg cattggaacg cggattcccc gtgccaagag tgacgtaagt accgcctata 1620

gagtctatag gcccacaaaa aatgctttct tcttttaata tactttttg tttatcttat 1680

ttctaatact ttccctaatc tctttctttc agggcaataa tgatacaatg tatcatgcct 1740

ctttgcacca ttctaaagaa taacagtgat aatttctggg ttaaggcaat agcaatattt 1800

ctgcatataa atatttctgc atataaattg taactgatgt aagaggtttc atattgctaa 1860

tagcagctac aatccagcta ccattctgct tttattttat ggttgggata aggctggatt 1920

attctgagtc caagctaggc ccttttgcta atcatgttca tacctcttat cttcctccca 1980

cagctcctgg gcaacgtgct ggtctgtgtg ctggcccatc actttggcaa agaattggga 2040

ttcgaacatc ggccgccacc atgaacgcaa gtgaattccg aaggagaggg aaggagatgg 2100

tggattacgt ggccaactac atggaaggca ttgagggacg ccaggtctac cctgacgtgg 2160

agcccgggta cctgcggccg ctgatccctg ccgctgcccc tcaggagcca gacacgtttg 2220

aggacatcat caacgacgtt gagaagataa tcatgcctgg ggtgacgcac tggcacagcc 2280

cctacttctt cgcctacttc cccactgcca gctcgtaccc ggccatgctt gcggacatgc 2340

tgtgcggggc cattggctgc atcggcttct cctgggcggc aagcccagca tgcacagagc 2400

tggagactgt gatgatggac tggctcggga agatgctgga actaccaaag gcatttttga 2460

atgagaaagc tggagaaggg ggaggagtga tccagggaag tgccagtgaa gccaccctgg 2520

tggccctgct ggccgctcgg accaaagtga tccatcggct gcaggcagcg tccccagagc 2580

tcacacaggc cgctatcatg gagaagctgg tggcttactc atccgatcag gcacactcct 2640

cagtggaaag agctgggtta attggtggag tgaaattaaa agccatcccc tcagatggca 2700

acttcgccat gcgtgcgtct gccctgcagg aagccctgga gagagacaaa gcggctggcc 2760

tgattccttt ctttatggtt gccaccctgg ggaccacaac atgctgctcc tttgacaatc 2820

tcttagaagt cggtcctatc tgcaacaagg aagacatatg gctgcacgtt gatgcagcct 2880

acgcaggcag tgcattcatc tgccctgagt tccggcacct tctgaatgga gtggagtttg 2940

cagattcatt caactttaat ccccacaaat ggctattggt gaattttgac tgttctgcca 3000

tgtgggtgaa aaagagaaca gacttaacgg gagcctttag actggacccc acttacctga 3060

agcacagcca tcaggattca gggcttatca ctgactaccg gcattggcag ataccactgg 3120

gcagaagatt tcgctctttg aaaatgtggt ttgtatttag gatgtatgga gtcaaaggac 3180

tgcaggctta tatccgcaag catgtccagc tgtcccatga gtttgagtca ctggtgcgcc 3240

aggatccccg ctttgaaatc tgtgtggaag tcattctggg gcttgtctgc tttcggctaa 3300

agggttccaa caaagtgaat gaagctcttc tgcaaagaat aaacagtgcc aaaaaaatcc 3360

acttggttcc atgtcacctc agggacaagt ttgtcctgcg ctttgccatc tgttctcgca 3420

cggtggaatc tgcccatgtg cagcgggcct gggaacacat caaagagctg gcggccgacg 3480

tgctgcgagc agagagggag taggagtgaa gccagctgca ggaatcaaaa attgaagaga 3540

gatatatctg aaaactggaa taagaagcaa ataaatatca tcctgccttc atggaactca 3600

gctgtctgtg gcttcccatg tctttctcca aagttatcca gagggttgtg attttgtctg 3660

cttagtatct catcaacaaa gaaatattat ttgctaatta aaaagttaat cttcatggcc 3720

atagctttta ttcattagct gtgatttttg ttgattaaaa cattatagat tttcatgttc 3780

ttgcagtcat cagaagtggt aggaaagcct cactgatata ttttccaggg caatcaatgt 3840

tcacgcaact tgaaattata tctgtggtct tcaaattgtc ttttgtcatg tggctaaatg 3900

cctaataagc tgctcgagag atctacgggt ggcatccctg tgacccctcc ccagtgcctc 3960

tcctggccct ggaagttgcc actccagtgc ccaccagcct tgtcctaata aaattaagtt 4020

gcatcatttt gtctgactag gtgtccttct ataatattat ggggtggagg ggggtggtat 4080

ggagcaaggg gcaagttggg aagacaacct gtagggcctg cggggtctat tgggaaccaa 4140

gctggagtgc agtggcacaa tcttggctca ctgcaatctc cgcctcctgg gttcaagcga 4200

ttctcctgcc tcagcctccc gagttgttgg gattccaggc atgcatgacc aggctcagct 4260

aatttttgtt tttttggtag agacggggtt tcaccatatt ggccaggctg gtctccaact 4320

cctaatctca ggtgatctac ccaccttggc ctcccaaatt gctgggatta caggcgtgaa 4380

ccactgctcc cttccctgtc cttctgattt tgtaggtaac cgtaaccccg gaccacgtgc 4440

ggaccgagcg gccgctctag agcatggcta cgtagataag tagcatggcg ggttaatcat 4500

taactacaag gaacccctag tgatggagtt ggccactccc tctctgcgcg ctcgctcgct 4560

cactgaggcc gggcgaccaa aggtcgcccg acgcccgggc ggcctcagtg agcgagcgag 4620

cgcgcagctg cctgcaggtc tgagacaata accctgataa atgcttcaat aatgtagcca 4680

accactagaa ctatagctag agtcctgggc gaacaaacga tgctcgcctt ccagaaaacc 4740

gaggatgcga accacttcat ccggggtcag caccaccggc aagcgccgcg acggccgagg 4800

tcttccgatc tcctgaagcc agggcagatc cgtgcacagc accttgccgt agaagaacag 4860

caaggccgcc aatgcctgac gatgcgtgga gaccgaaacc ttgcgctcgt tcgccagcca 4920

ggacagaaat gcctcgactt cgctgctgcc caaggttgcc gggtgacgca caccgtggaa 4980

acggatgaag gcacgaaccc agttgacata agcctgttcg gttcgtaaac tgtaatgcaa 5040

gtagcgtatg cgctcacgca actggtccag aaccttgacc gaacgcagcg gtggtaacgg 5100

cgcagtggcg gttttcatgg cttgttatga ctgtttttt gtacagtcta tgcctcgggc 5160

atccaagcag caagcgcgtt acgccgtggg tcgatgtttg atgttatgga gcagcaacga 5220

tgttacgcag cagcaacgat gttacgcagc agggcagtcg ccctaaaaca aagttaggtg 5280

gctcaagtat gggcatcatt cgcacatgta ggctcggccc tgaccaagtc aaatccatgc 5340

gggctgctct tgatcttttc ggtcgtgagt tcggagacgt agccacctac tcccaacatc 5400

agccggactc cgattacctc gggaacttgc tccgtagtaa gacattcatc gcgcttgctg 5460

ccttcgacca agaagcggtt gttggcgctc tcgcggctta cgttctgccc aagtttgagc 5520

agccgcgtag tgagatctat atctatgatc tcgcagtctc cggcgagcac cggaggcagg 5580

gcattgccac cgcgctcatc aatctcctca agcatgaggc caacgcgctt ggtgcttatg 5640

tgatctacgt gcaagcagat tacggtgacg atcccgcagt ggctctctat acaaagttgg 5700

gcatacggga agaagtgatg cactttgata tcgacccaag taccgccacc taacaattcg 5760

ttcaagccga gatcggcttc ccggccgcgg agttgttcgg taaattgtca caacgccgcg 5820

aatatagtct ttaccatgcc cttggccacg cccctcttta atacgacggg caatttgcac 5880

ttcagaaaat gaagagtttg ctttagccat aacaaaagtc cagtatgctt tttcacagca 5940

taactggact gatttcagtt tacaactatt ctgtctagtt taagacttta ttgtcatagt 6000

ttagatctat tttgttcagt ttaagacttt attgtccgcc cacacccgct tacgcagggc 6060

atccatttat tactcaaccg taaccgattt tgccaggtta cgcggctggt ctatgcggtg 6120

tgaaataccg cacagatgcg taaggagaaa ataccgcatc aggcgctctt ccgcttcctc 6180

gctcactgac tcgctgcgct cggtcgttcg gctgcggcga gcggtatcag ctcactcaaa 6240

ggcggtaata cggttatcca cagaatcagg ggataacgca ggaaagaaca tgtgagcaaa 6300

aggccagcaa aaggccagga accgtaaaaa ggccgcgttg ctggcgtttt tccataggct 6360

ccgcccccct gacgagcatc acaaaaatcg acgctcaagt cagaggtggc gaaacccgac 6420

aggactataa agataccagg cgtttccccc tggaagctcc ctcgtgcgct ctcctgttcc 6480

gaccctgccg cttaccggat acctgtccgc ctttctccct tcgggaagcg tggcgctttc 6540

tcatagctca cgctgtaggt atctcagttc ggtgtaggtc gttcgctcca agctgggctg 6600

tgtgcacgaa ccccccgttc agcccgaccg ctgcgcctta tccggtaact atcgtcttga 6660

gtccaacccg gtaagacacg acttatcgcc actggcagca gccactggta acaggattag 6720

cagagcgagg tatgtaggcg gtgctacaga gttcttgaag tggtggccta actacggcta 6780

cactagaaga acagtatttg gtatctgcgc tctgctgaag ccagttacct tcggaaaaag 6840

agttggtagc tcttgatccg gcaaacaaac caccgctggt agcggtggtt tttttgtttg 6900

caagcagcag attacgcgca gaaaaaaagg atctcaagaa gatcctttga tcttttctac 6960

ggggtctgac gctcagtgga acgaaaactc acgttaaggg attttggtca tgagattatc 7020

aaaaaggatc ttcacctaga tccttttaaa ttaaaaatga agttttaaat caatctaaag 7080

tatatatgag taaacttggt ctgacagtta ccaatgctta atcagtgagg cacctatctc 7140

agcgatctgt ctatttcgtt catccatagt tgcctgactc cccgtcgtgt agataactac 7200

gatacgggag ggcttaccat ctggccccag tgctgcaatg ataccgcgag acccacgctc 7260

accggctcca gatttatcag caataaacca gccagccgga agggccgagc gcagaagtgg 7320

tcctgcaact ttatccgcct ccatccagtc tattaattgt tgccgggaag ctagagtaag 7380

tagttcgcca gttaatagtt tgcgcaacgt tgttgccatt gctacaggca tcgtggtgtc 7440

acgctcgtcg tttggtatgg cttcattcag ctccggttcc caacgatcaa ggcgagttac 7500

atgatccccc atgttgtgca aaaaagcggt tagctccttc ggtcctccga tcgttgtcag 7560

aagtaagttg gccgcagtgt tatcactcat ggttatggca gcactgcata attctcttac 7620

tgtcatgcca tccgtaagat gcttttctgt gactggtgag tactcaacca agtcattctg 7680

agaatagtgt atgcggcgac cgagttgctc ttgcccggcg tcaatacggg ataataccgc 7740

gccacatagc agaactttaa aagtgctcat cattggaaaa cgttcttcgg ggcgaaaact 7800

ctcaaggatc ttaccgctgt tgagatccag ttcgatgtaa cccactcgtg cacccaactg 7860

atcttcagca tcttttactt tcaccagcgt ttctgggtga gcaaaaacag gaaggcaaaa 7920

tgccgcaaaa aagggaataa gggcgacacg gaaatgttga atactcatac tcttcctttt 7980

tcaatattat tgaagcattt atcagggtta ttgtctcatg agcggataca tatttgaatg 8040

tatttagaaa aataaacaaa taggggttcc gcgcacattt ccccgaaaag tgccacctaa 8100

attgtaagcg ttaatatttt gttaaaattc gcgttaaatt tttgttaaat cagctcattt 8160

tttaaccaat aggccgaaat cggcaaaatc ccttataaat caaaagaata gaccgagata 8220

gggttgagtg ttgttccagt ttggaacaag agtccactat taaagaacgt ggactccaac 8280

gtcaaagggc gaaaaaccgt ctatcagggc gatggcccac tacgtgaacc atcaccctaa 8340

tcaagttttt tggggtcgag gtgccgtaaa gcactaaatc ggaaccctaa agggagcccc 8400

cgatttagag cttgacgggg aaagccggcg aacgtggcga gaaaggaagg gaagaaagcg 8460

aaaggagcgg gcgctagggc gctggcaagt gtagcggtca cgctgcgcgt aaccaccaca 8520

cccgccgcgc ttaatgcgcc gctacagggc gcgtc 8555

<210> 5
<211> 8694
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 5
cattcgccat tcaggctgca ataaagcgtt gatattcagt caattacaaa cattaataac 60

gaagagatga cagaaaaatt ttcattctgt gacagagaaa aagtagccga agatgacggt 120

ttgtcacatg gagttggcag gatgtttgat taaaaacata acaggaagaa aaatgccccg 180

ctgtgggcgg acaaaatagt tgggaactgg gaggggtgga aatggagttt ttaaggatta 240

tttagggaag agtgacaaaa tagatgggaa ctgggtgtag cgtcgtaagc taatacgaaa 300

attaaaaatg acaaaatagt ttggaactag atttcactta tctggttcgg atctcctagg 360

cgatatcagt gatcagatcc agacatgata agatacattg atgagtttgg acaaaccaca 420

actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat tgctttattt 480

gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca ttttatgttt 540

caggttcagg gggaggtgtg ggaggttttt taaagcaagt aaaacctcta caaatgtggt 600

atggctgatt atgatcctct agtacttctc gacaagctta cattattgaa gcatttatca 660

gggttattgt ctcagacctg caggcagctg cgcgctcgct cgctcactga ggccgcccgg 720

gcaaagcccg ggcgtcgggc gacctttggt cgcccggcct cagtgagcga gcgagcgcgc 780

agagagggag tggccaactc catcactagg ggttccttgt agttaatgat taacccgcca 840

tgctacttat ctacgtagcc atgctctaga gcggccgcaa cgcgtaaact tcgtcgacga 900

tctgcggccg cacgcgtgga gctagttatt aatagtaatc aattacgggg tcattagttc 960

atagcccata tatggagttc cgcgttacat aacttacggt aaatggcccg cctggctgac 1020

cgcccaacga cccccgccca ttgacgtcaa taatgacgta tgttcccata gtaacgtcaa 1080

tagggacttt ccattgacgt caatgggtgg agtatttacg gtaaactgcc cacttggcag 1140

tacatcaagt gtatcatatg ccaagtacgc cccctattga cgtcaatgac ggtaaatggc 1200

ccgcctggca ttatgcccag tacatgacct tatgggactt tcctacttgg cagtacatct 1260

acgtattagt catcgctatt accatggtga tgcggttttg gcagtacatc aatgggcgtg 1320

gatagcggtt tgactcacgg ggatttccaa gtctccaccc cattgacgtc aatgggagtt 1380

tgttttgcac caaaatcaac gggactttcc aaaatgtcgt aacaactccg ccccattgac 1440

gcaaatgggc ggtaggcgtg tacggtggga ggtctatata agcagagctc gtttagtgaa 1500

ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 1560

ccgatccagc ctccgcggat tcgaatcccg gccgggaacg gtgcattgga acgcggattc 1620

cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccaca aaaaatgctt 1680

tcttctttta atatactttt ttgtttatct tatttctaat actttcccta atctctttct 1740

ttcagggcaa taatgataca atgtatcatg cctctttgca ccattctaaa gaataacagt 1800

gataatttct gggttaaggc aatagcaata tttctgcata taaatatttc tgcatataaa 1860

ttgtaactga tgtaagaggt ttcatattgc taatagcagc tacaatccag ctaccattct 1920

gcttttattt tatggttggg ataaggctgg attattctga gtccaagcta ggccctttg 1980

ctaatcatgt tcatacctct tatcttcctc ccacagctcc tgggcaacgt gctggtctgt 2040

gtgctggccc atcactttgg caaagaattg ggattcgaac atcgaattcg ggcacgaggg 2100

aggacagaga gcaagtcact cccggctgcc tttttcacct ctgacagagc ccagacacca 2160

tgaacgcaag tgaattccga aggagaggga aggagatggt ggattacgtg gccaactaca 2220

tggaaggcat tgagggacgc caggtctacc ctgacgtgga gcccgggtac ctgcggccgc 2280

tgatccctgc cgctgcccct caggagccag acacgtttga ggacatcatc aacgacgttg 2340

agaagataat catgcctggg gtgacgcact ggcacagccc ctacttcttc gcctacttcc 2400

ccactgccag ctcgtacccg gccatgcttg cggacatgct gtgcggggcc attggctgca 2460

tcggcttctc ctgggcggca agcccagcat gcacagagct ggagactgtg atgatggact 2520

ggctcgggaa gatgctggaa ctaccaaagg catttttgaa tgagaaagct ggagaagggg 2580

gaggagtgat ccagggaagt gccagtgaag ccaccctggt ggccctgctg gccgctcgga 2640

ccaaagtgat ccatcggctg caggcagcgt ccccagagct cacacaggcc gctatcatgg 2700

agaagctggt ggcttactca tccgatcagg cacactcctc agtggaaaga gctgggttaa 2760

ttggtggagt gaaattaaaa gccatcccct cagatggcaa cttcgccatg cgtgcgtctg 2820

ccctgcagga agccctggag agagacaaag cggctggcct gattcctttc tttatggttg 2880

ccaccctggg gaccacaaca tgctgctcct ttgacaatct cttagaagtc ggtcctatct 2940

gcaacaagga agacatatgg ctgcacgttg atgcagccta cgcaggcagt gcattcatct 3000

gccctgagtt ccggcacctt ctgaatggag tggagtttgc agattcattc aactttaatc 3060

cccacaaatg gctattggtg aattttgact gttctgccat gtgggtgaaa aagagaacag 3120

acttaacggg agcctttaga ctggacccca cttacctgaa gcacagccat caggattcag 3180

ggcttatcac tgactaccgg cattggcaga taccactggg cagaagattt cgctctttga 3240

aaatgtggtt tgtatttagg atgtatggag tcaaaggact gcaggcttat atccgcaagc 3300

atgtccagct gtcccatgag tttgagtcac tggtgcgcca ggatccccgc tttgaaatct 3360

gtgtggaagt cattctgggg cttgtctgct ttcggctaaa gggttccaac aaagtgaatg 3420

aagctcttct gcaaagaata aacagtgcca aaaaaatcca cttggttcca tgtcacctca 3480

gggacaagtt tgtcctgcgc tttgccatct gttctcgcac ggtggaatct gcccatgtgc 3540

agcgggcctg ggaacacatc aaagagctgg cggccgacgt gctgcgagca gagagggagt 3600

aggagtgaag ccagctgcag gaatcaaaaa ttgaagagag atatatctga aaactggaat 3660

aagaagcaaa taaatatcat cctgccttca tggaactcag ctgtctgtgg cttcccatgt 3720

ctttctccaa agttatccag agggttgtga ttttgtctgc ttagtatctc atcaacaaag 3780

aaatattatt tgctaattaa aaagttaatc ttcatggcca tagcttttat tcattagctg 3840

tgatttttgt tgattaaaac attatagatt ttcatgttct tgcagtcatc agaagtggta 3900

ggaaagcctc actgatatat tttccagggc aatcaatgtt cacgcaactt gaaattatat 3960

ctgtggtctt caaattgtct tttgtcatgt ggctaaatgc ctaataaaca attcaagtga 4020

aatactaaaa aaaaaaaaaa aaaaaaaagc tgctcgagag atctacgggt ggcatccctg 4080

tgacccctcc ccagtgcctc tcctggccct ggaagttgcc actccagtgc ccaccagcct 4140

tgtcctaata aaattaagtt gcatcatttt gtctgactag gtgtccttct ataatattat 4200

ggggtggagg ggggtggtat ggagcaaggg gcaagttggg aagacaacct gtagggcctg 4260

cggggtctat tgggaaccaa gctggagtgc agtggcacaa tcttggctca ctgcaatctc 4320

cgcctcctgg gttcaagcga ttctcctgcc tcagcctccc gagttgttgg gattccaggc 4380

atgcatgacc aggctcagct aatttttgtt tttttggtag agacggggtt tcaccatatt 4440

ggccaggctg gtctccaact cctaatctca ggtgatctac ccaccttggc ctcccaaatt 4500

gctgggatta caggcgtgaa ccactgctcc cttccctgtc cttctgattt tgtaggtaac 4560

gtaaccccgg accacgtgcg gaccgagcgg ccgctctaga gcatggctac gtagataagt 4620

agcatggcgg gttaatcatt aactacaagg aacccctagt gatggagttg gccactccct 4680

ctctgcgcgc tcgctcgctc actgaggccg ggcgaccaaa ggtcgcccga cgcccgggcg 4740

gcctcagtga gcgagcgagc gcgcagctgc ctgcaggtct gagacaataa ccctgataaa 4800

tgcttcaata atgtagccaa ccactagaac tatagctaga gtcctgggcg aacaaacgat 4860

gctcgccttc cagaaaaccg aggatgcgaa ccacttcatc cggggtcagc accaccggca 4920

agcgccgcga cggccgaggt cttccgatct cctgaagcca gggcagatcc gtgcacagca 4980

ccttgccgta gaagaacagc aaggccgcca atgcctgacg atgcgtggag accgaaacct 5040

tgcgctcgtt cgccagccag gacagaaatg cctcgacttc gctgctgccc aaggttgccg 5100

ggtgacgcac accgtggaaa cggatgaagg cacgaaccca gttgacataa gcctgttcgg 5160

ttcgtaaact gtaatgcaag tagcgtatgc gctcacgcaa ctggtccaga accttgaccg 5220

aacgcagcgg tggtaacggc gcagtggcgg ttttcatggc ttgttatgac tgtttttttg 5280

tacagtctat gcctcgggca tccaagcagc aagcgcgtta cgccgtgggt cgatgtttga 5340

tgttatggag cagcaacgat gttacgcagc agcaacgatg ttacgcagca gggcagtcgc 5400

cctaaaacaa agttaggtgg ctcaagtatg ggcatcattc gcacatgtag gctcggccct 5460

gaccaagtca aatccatgcg ggctgctctt gatcttttcg gtcgtgagtt cggagacgta 5520

gccacctact cccaacatca gccggactcc gattacctcg ggaacttgct ccgtagtaag 5580

acattcatcg cgcttgctgc cttcgaccaa gaagcggttg ttggcgctct cgcggcttac 5640

gttctgccca agtttgagca gccgcgtagt gagatctata tctatgatct cgcagtctcc 5700

ggcgagcacc ggaggcaggg cattgccacc gcgctcatca atctcctcaa gcatgaggcc 5760

aacgcgcttg gtgcttatgt gatctacgtg caagcagatt acggtgacga tcccgcagtg 5820

gctctctata caaagttggg catacgggaa gaagtgatgc actttgatat cgacccaagt 5880

accgccacct aacaattcgt tcaagccgag atcggcttcc cggccgcgga gttgttcggt 5940

aaattgtcac aacgccgcga atatagtctt taccatgccc ttggccacgc ccctctttaa 6000

tacgacgggc aatttgcact tcagaaaatg aagagtttgc tttagccata acaaaagtcc 6060

agtatgcttt ttcacagcat aactggactg atttcagttt acaactattc tgtctagttt 6120

aagactttat tgtcatagtt tagatctatt ttgttcagtt taagacttta ttgtccgccc 6180

acacccgctt acgcagggca tccatttatt actcaaccgt aaccgatttt gccaggttac 6240

gcggctggtc tatgcggtgt gaaataccgc acagatgcgt aaggagaaaa taccgcatca 6300

ggcgctcttc cgcttcctcg ctcactgact cgctgcgctc ggtcgttcgg ctgcggcgag 6360

cggtatcagc tcactcaaag gcggtaatac ggttatccac agaatcaggg gataacgcag 6420

gaaagaacat gtgagcaaaa ggccagcaaa aggccaggaa ccgtaaaaag gccgcgttgc 6480

tggcgttttt ccataggctc cgcccccctg acgagcatca caaaaatcga cgctcaagtc 6540

agaggtggcg aaacccgaca ggactataaa gataccaggc gtttcccccct ggaagctccc 6600

tcgtgcgctc tcctgttccg accctgccgc ttaccggata cctgtccgcc tttctccctt 6660

cgggaagcgt ggcgctttct catagctcac gctgtaggta tctcagttcg gtgtaggtcg 6720

ttcgctccaa gctgggctgt gtgcacgaac cccccgttca gcccgaccgc tgcgccttat 6780

ccggtaacta tcgtcttgag tccaacccgg taagacacga cttatcgcca ctggcagcag 6840

ccactggtaa caggattagc agagcgaggt atgtaggcgg tgctacagag ttcttgaagt 6900

ggtggcctaa ctacggctac actagaagaa cagtatttgg tatctgcgct ctgctgaagc 6960

cagttacctt cggaaaaaga gttggtagct cttgatccgg caaacaaacc accgctggta 7020

gcggtggttt ttttgtttgc aagcagcaga ttacgcgcag aaaaaaagga tctcaagaag 7080

atcctttgat cttttctacg gggtctgacg ctcagtggaa cgaaaactca cgttaaggga 7140

ttttggtcat gagattatca aaaaggatct tcacctagat ccttttaaat taaaaatgaa 7200

gttttaaatc aatctaaagt atatatgagt aaacttggtc tgacagttac caatgcttaa 7260

tcagtgaggc acctatctca gcgatctgtc tatttcgttc atccatagtt gcctgactcc 7320

ccgtcgtgta gataactacg atacgggagg gcttaccatc tggccccagt gctgcaatga 7380

taccgcgaga cccacgctca ccggctccag atttatcagc aataaaccag ccagccggaa 7440

gggccgagcg cagaagtggt cctgcaactt tatccgcctc catccagtct attaattgtt 7500

gccgggaagc tagagtaagt agttcgccag ttaatagttt gcgcaacgtt gttgccattg 7560

ctacaggcat cgtggtgtca cgctcgtcgt ttggtatggc ttcattcagc tccggttccc 7620

aacgatcaag gcgagttaca tgatccccca tgttgtgcaa aaaagcggtt agctccttcg 7680

gtcctccgat cgttgtcaga agtaagttgg ccgcagtgtt atcactcatg gttatggcag 7740

cactgcataa ttctcttact gtcatgccat ccgtaagatg cttttctgtg actggtgagt 7800

actcaaccaa gtcattctga gaatagtgta tgcggcgacc gagttgctct tgcccggcgt 7860

caatacggga taataccgcg ccacatagca gaactttaaa agtgctcatc attggaaaac 7920

gttcttcggg gcgaaaactc tcaaggatct taccgctgtt gagatccagt tcgatgtaac 7980

ccactcgtgc acccaactga tcttcagcat cttttacttt caccagcgtt tctgggtgag 8040

caaaaacagg aaggcaaaat gccgcaaaaa agggaataag ggcgacacgg aaatgttgaa 8100

tactcatact cttccttttt caatattatt gaagcattta tcagggttat tgtctcatga 8160

gcggatacat atttgaatgt atttagaaaa ataaacaaat aggggttccg cgcacatttc 8220

cccgaaaagt gccacctaaa ttgtaagcgt taatattttg ttaaaattcg cgttaaattt 8280

ttgttaaatc agctcatttt ttaaccaata ggccgaaatc ggcaaaatcc cttataaatc 8340

aaaagaatag accgagatag ggttgagtgt tgttccagtt tggaacaaga gtccactatt 8400

aaagaacgtg gactccaacg tcaaagggcg aaaaaccgtc tatcagggcg atggcccact 8460

acgtgaacca tcaccctaat caagtttttt ggggtcgagg tgccgtaaag cactaaatcg 8520

gaaccctaaa gggagccccc gatttagagc ttgacgggga aagccggcga acgtggcgag 8580

aaaggaaggg aagaaagcga aaggagcggg cgctagggcg ctggcaagtg tagcggtcac 8640

gctgcgcgta accaccacac ccgccgcgct taatgcgccg ctacagggcg cgtc 8694

<210> 6
<211> 3535
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 6
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct tgtagttaat gattaacccg ccatgctact tatctacgta gccatgctct 180

agagcggccg cacgcgtgga gctagttatt aatagtaatc aattacgggg tcattagttc 240

atagcccata tatggagttc cgcgttacat aacttacggt aaatggcccg cctggctgac 300

cgcccaacga cccccgccca ttgacgtcaa taatgacgta tgttcccata gtaacgtcaa 360

tagggacttt ccattgacgt caatgggtgg agtatttacg gtaaactgcc cacttggcag 420

tacatcaagt gtatcatatg ccaagtacgc cccctattga cgtcaatgac ggtaaatggc 480

ccgcctggca ttatgcccag tacatgacct tatgggactt tcctacttgg cagtacatct 540

acgtattagt catcgctatt accatggtga tgcggttttg gcagtacatc aatgggcgtg 600

gatagcggtt tgactcacgg ggatttccaa gtctccaccc cattgacgtc aatgggagtt 660

tgttttgcac caaaatcaac gggactttcc aaaatgtcgt aacaactccg ccccattgac 720

gcaaatgggc ggtaggcgtg tacggtggga ggtctatata agcagagctc gtttagtgaa 780

ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 840

ccgatccagc ctccgcggat tcgaatcccg gccgggaacg gtgcattgga acgcggattc 900

cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccaca aaaaatgctt 960

tcttctttta atatactttt ttgtttatct tatttctaat actttcccta atctctttct 1020

ttcagggcaa taatgataca atgtatcatg cctctttgca ccattctaaa gaataacagt 1080

gataatttct gggttaaggc aatagcaata tttctgcata taaatatttc tgcatataaa 1140

ttgtaactga tgtaagaggt ttcatattgc taatagcagc tacaatccag ctaccattct 1200

gcttttattt tatggttggg ataaggctgg attattctga gtccaagcta ggccctttg 1260

ctaatcatgt tcatacctct tatcttcctc ccacagctcc tgggcaacgt gctggtctgt 1320

gtgctggccc atcactttgg caaagaattg ggattcgaac atcggccgcc accatgaacg 1380

caagtgaatt ccgaaggaga gggaaggaga tggtggatta cgtggccaac tacatggaag 1440

gcattgaggg acgccaggtc taccctgacg tggagcccgg gtacctgcgg ccgctgatcc 1500

ctgccgctgc ccctcaggag ccagacacgt ttgaggacat catcaacgac gttgagaaga 1560

taatcatgcc tggggtgacg cactggcaca gcccctactt cttcgcctac ttccccactg 1620

ccagctcgta cccggccatg cttgcggaca tgctgtgcgg ggccattggc tgcatcggct 1680

tctcctgggc ggcaagccca gcatgcacag agctggagac tgtgatgatg gactggctcg 1740

ggaagatgct ggaactacca aaggcatttt tgaatgagaa agctggagaa gggggaggag 1800

tgatccaggg aagtgccagt gaagccaccc tggtggccct gctggccgct cggaccaaag 1860

tgatccatcg gctgcaggca gcgtccccag agctcacaca ggccgctatc atggagaagc 1920

tggtggctta ctcatccgat caggcacact cctcagtgga aagagctggg ttaattggtg 1980

gagtgaaatt aaaagccatc ccctcagatg gcaacttcgc catgcgtgcg tctgccctgc 2040

aggaagccct ggagagagac aaagcggctg gcctgattcc tttctttatg gttgccaccc 2100

tggggaccac aacatgctgc tcctttgaca atctcttaga agtcggtcct atctgcaaca 2160

aggaagacat atggctgcac gttgatgcag cctacgcagg cagtgcattc atctgccctg 2220

agttccggca ccttctgaat ggagtggagt ttgcagattc attcaacttt aatccccaca 2280

aatggctatt ggtgaatttt gactgttctg ccatgtgggt gaaaaagaga acagacttaa 2340

cgggagcctt tagactggac cccacttacc tgaagcacag ccatcaggat tcagggctta 2400

tcactgacta ccggcattgg cagataccac tgggcagaag atttcgctct ttgaaaatgt 2460

ggtttgtatt taggatgtat ggagtcaaag gactgcaggc ttatatccgc aagcatgtcc 2520

agctgtccca tgagtttgag tcactggtgc gccaggatcc ccgctttgaa atctgtgtgg 2580

aagtcattct ggggcttgtc tgctttcggc taaagggttc caacaaagtg aatgaagctc 2640

ttctgcaaag aataaacagt gccaaaaaaa tccacttggt tccatgtcac ctcagggaca 2700

agtttgtcct gcgctttgcc atctgttctc gcacggtgga atctgcccat gtgcagcggg 2760

cctgggaaca catcaaagag ctggcggccg acgtgctgcg agcagagagg gagtaggagt 2820

gagctgctcg agagatctac gggtggcatc cctgtgaccc ctccccagtg cctctcctgg 2880

ccctggaagt tgccactcca gtgcccacca gccttgtcct aataaaatta agttgcatca 2940

ttttgtctga ctaggtgtcc ttctataata ttatggggtg gaggggggtg gtatggagca 3000

aggggcaagt tgggaagaca acctgtaggg cctgcggggt ctattgggaa ccaagctgga 3060

gtgcagtggc acaatcttgg ctcactgcaa tctccgcctc ctgggttcaa gcgattctcc 3120

tgcctcagcc tcccgagttg ttgggattcc aggcatgcat gaccaggctc agctaatttt 3180

tgtttttttg gtagagacgg ggtttcacca tattggccag gctggtctcc aactcctaat 3240

ctcaggtgat ctacccacct tggcctccca attgctggg attacaggcg tgaaccactg 3300

ctcccttccc tgtccttctg attttgtagg taaccccgga ccacgtgcgg accgagcggc 3360

cgctctagag catggctacg tagataagta gcatggcggg ttaatcatta actacaagga 3420

acccctagtg atggagttgg ccactccctc tctgcgcgct cgctcgctca ctgaggccgg 3480

gcgaccaaag gtcgcccgac gcccgggcgg cctcagtgag cgagcgagcg cgcag 3535

<210> 7
<211> 3534
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 7
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct tgtagttaat gattaacccg ccatgctact tatctacgta gccatgctct 180

agagcggccg cacgcgtgga gctagttatt aatagtaatc aattacgggg tcattagttc 240

atagcccata tatggagttc cgcgttacat aacttacggt aaatggcccg cctggctgac 300

cgcccaacga cccccgccca ttgacgtcaa taatgacgta tgttcccata gtaacgtcaa 360

tagggacttt ccattgacgt caatgggtgg agtatttacg gtaaactgcc cacttggcag 420

tacatcaagt gtatcatatg ccaagtacgc cccctattga cgtcaatgac ggtaaatggc 480

ccgcctggca ttatgcccag tacatgacct tatgggactt tcctacttgg cagtacatct 540

acgtattagt catcgctatt accatggtga tgcggttttg gcagtacatc aatgggcgtg 600

gatagcggtt tgactcacgg ggatttccaa gtctccaccc cattgacgtc aatgggagtt 660

tgttttgcac caaaatcaac gggactttcc aaaatgtcgt aacaactccg ccccattgac 720

gcaaatgggc ggtaggcgtg tacggtggga ggtctatata agcagagctc gtttagtgaa 780

ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 840

ccgatccagc ctccgcggat tcgaatcccg gccgggaacg gtgcattgga acgcggattc 900

cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccaca aaaaatgctt 960

tcttctttta atatactttt ttgtttatct tatttctaat actttcccta atctctttct 1020

ttcagggcaa taatgataca atgtatcatg cctctttgca ccattctaaa gaataacagt 1080

gataatttct gggttaaggc aatagcaata tttctgcata taaatatttc tgcatataaa 1140

ttgtaactga tgtaagaggt ttcatattgc taatagcagc tacaatccag ctaccattct 1200

gcttttattt tatggttggg ataaggctgg attattctga gtccaagcta ggccctttg 1260

ctaatcatgt tcatacctct tatcttcctc ccacagctcc tgggcaacgt gctggtctgt 1320

gtgctggccc atcactttgg caaagaattg ggattcgaac atcggccgcc accatgaacg 1380

ccagcgagtt caggaggagg ggcaaggaga tggtggacta cgtggccaac tacatggagg 1440

gcatcgaggg caggcaggtg taccccgacg tggagcccgg ctacctgagg cccctgatcc 1500

ccgccgccgc cccccaggag cccgacacct tcgaggacat catcaacgac gtggagaaga 1560

tcatcatgcc cggcgtgacc cactggcaca gcccctactt cttcgcctac ttccccaccg 1620

ccagcagcta ccccgccatg ctggccgaca tgctgtgcgg cgccatcggc tgcatcggct 1680

tcagctgggc cgccagcccc gcctgcaccg agctggagac cgtgatgatg gactggctgg 1740

gcaagatgct ggagctgccc aaggccttcc tgaacgagaa ggccggcgag ggcggcggcg 1800

tgatccaggg cagcgccagc gaggccaccc tggtggccct gctggccgcc aggaccaagg 1860

tgatccacag gctgcaggcc gccagccccg agctgaccca ggccgccatc atggagaagc 1920

tggtggccta cagcagcgac caggcccaca gcagcgtgga gagggccggc ctgatcggcg 1980

gcgtgaagct gaaggccatc cccagcgacg gcaacttcgc catgagggcc agcgccctgc 2040

aggaggccct ggagagggac aaggccgccg gcctgatccc cttcttcatg gtggccaccc 2100

tgggcaccac cacctgctgc agcttcgaca acctgctgga ggtgggcccc atctgcaaca 2160

aggaggacat ctggctgcac gtggacgccg cctacgccgg cagcgccttc atctgccccg 2220

agttcaggca cctgctgaac ggcgtggagt tcgccgacag cttcaacttc aacccccaca 2280

agtggctgct ggtgaacttc gactgcagcg ccatgtgggt gaagaagagg accgacctga 2340

ccggcgcctt caggctggac cccacctacc tgaagcacag ccaccaggac agcggcctga 2400

tcaccgacta caggcactgg cagatccccc tgggcaggag gttcaggagc ctgaagatgt 2460

ggttcgtgtt caggatgtac ggcgtgaagg gcctgcaggc ctacatcagg aagcacgtgc 2520

agctgagcca cgagttcgag agcctggtga ggcaggaccc caggttcgag atctgcgtgg 2580

aggtgatcct gggcctggtg tgcttcaggc tgaagggcag caacaaggtg aacgaggccc 2640

tgctgcagag gatcaacagc gccaagaaga tccacctggt gccctgccac ctgagggaca 2700

agttcgtgct gaggttcgcc atctgcagca ggaccgtgga gagcgcccac gtgcagaggg 2760

cctgggagca catcaaggag ctggccgccg acgtgctgag ggccgagagg gagtgagctg 2820

ctcgagagat ctacgggtgg catccctgtg acccctcccc agtgcctctc ctggccctgg 2880

aagttgccac tccagtgccc accagccttg tcctaataaa attaagttgc atcattttgt 2940

ctgactaggt gtccttctat aatattatgg ggtggagggg ggtggtatgg agcaaggggc 3000

aagttgggaa gacaacctgt agggcctgcg gggtctattg ggaaccaagc tggagtgcag 3060

tggcacaatc ttggctcact gcaatctccg cctcctgggt tcaagcgatt ctcctgcctc 3120

agcctcccga gttgttggga ttccaggcat gcatgaccag gctcagctaa tttttgtttt 3180

tttggtagag acggggtttc accatattgg ccaggctggt ctccaactcc taatctcagg 3240

tgatctaccc accttggcct cccaaattgc tgggattaca ggcgtgaacc actgctccct 3300

tccctgtcct tctgattttg taggtaacgt aaccccggac cacgtgcgga ccgagcggcc 3360

gctctagagc atggctacgt agataagtag catggcgggt taatcattaa ctacaaggaa 3420

cccctagtga tggagttggc cactccctct ctgcgcgctc gctcgctcac tgaggccggg 3480

cgaccaaagg tcgcccgacg cccgggcggc ctcagtgagc gagcgagcgc gcag 3534

<210> 8
<211> 3940
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 8
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct tgtagttaat gattaacccg ccatgctact tatctacgta gccatgctct 180

agagcggccg cacgcgtgga gctagttatt aatagtaatc aattacgggg tcattagttc 240

atagcccata tatggagttc cgcgttacat aacttacggt aaatggcccg cctggctgac 300

cgcccaacga cccccgccca ttgacgtcaa taatgacgta tgttcccata gtaacgtcaa 360

tagggacttt ccattgacgt caatgggtgg agtatttacg gtaaactgcc cacttggcag 420

tacatcaagt gtatcatatg ccaagtacgc cccctattga cgtcaatgac ggtaaatggc 480

ccgcctggca ttatgcccag tacatgacct tatgggactt tcctacttgg cagtacatct 540

acgtattagt catcgctatt accatggtga tgcggttttg gcagtacatc aatgggcgtg 600

gatagcggtt tgactcacgg ggatttccaa gtctccaccc cattgacgtc aatgggagtt 660

tgttttgcac caaaatcaac gggactttcc aaaatgtcgt aacaactccg ccccattgac 720

gcaaatgggc ggtaggcgtg tacggtggga ggtctatata agcagagctc gtttagtgaa 780

ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 840

ccgatccagc ctccgcggat tcgaatcccg gccgggaacg gtgcattgga acgcggattc 900

cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccaca aaaaatgctt 960

tcttctttta atatactttt ttgtttatct tatttctaat actttcccta atctctttct 1020

ttcagggcaa taatgataca atgtatcatg cctctttgca ccattctaaa gaataacagt 1080

gataatttct gggttaaggc aatagcaata tttctgcata taaatatttc tgcatataaa 1140

ttgtaactga tgtaagaggt ttcatattgc taatagcagc tacaatccag ctaccattct 1200

gcttttattt tatggttggg ataaggctgg attattctga gtccaagcta ggccctttg 1260

ctaatcatgt tcatacctct tatcttcctc ccacagctcc tgggcaacgt gctggtctgt 1320

gtgctggccc atcactttgg caaagaattg ggattcgaac atcggccgcc accatgaacg 1380

caagtgaatt ccgaaggaga gggaaggaga tggtggatta cgtggccaac tacatggaag 1440

gcattgaggg acgccaggtc taccctgacg tggagcccgg gtacctgcgg ccgctgatcc 1500

ctgccgctgc ccctcaggag ccagacacgt ttgaggacat catcaacgac gttgagaaga 1560

taatcatgcc tggggtgacg cactggcaca gcccctactt cttcgcctac ttccccactg 1620

ccagctcgta cccggccatg cttgcggaca tgctgtgcgg ggccattggc tgcatcggct 1680

tctcctgggc ggcaagccca gcatgcacag agctggagac tgtgatgatg gactggctcg 1740

ggaagatgct ggaactacca aaggcatttt tgaatgagaa agctggagaa gggggaggag 1800

tgatccaggg aagtgccagt gaagccaccc tggtggccct gctggccgct cggaccaaag 1860

tgatccatcg gctgcaggca gcgtccccag agctcacaca ggccgctatc atggagaagc 1920

tggtggctta ctcatccgat caggcacact cctcagtgga aagagctggg ttaattggtg 1980

gagtgaaatt aaaagccatc ccctcagatg gcaacttcgc catgcgtgcg tctgccctgc 2040

aggaagccct ggagagagac aaagcggctg gcctgattcc tttctttatg gttgccaccc 2100

tggggaccac aacatgctgc tcctttgaca atctcttaga agtcggtcct atctgcaaca 2160

aggaagacat atggctgcac gttgatgcag cctacgcagg cagtgcattc atctgccctg 2220

agttccggca ccttctgaat ggagtggagt ttgcagattc attcaacttt aatccccaca 2280

aatggctatt ggtgaatttt gactgttctg ccatgtgggt gaaaaagaga acagacttaa 2340

cgggagcctt tagactggac cccacttacc tgaagcacag ccatcaggat tcagggctta 2400

tcactgacta ccggcattgg cagataccac tgggcagaag atttcgctct ttgaaaatgt 2460

ggtttgtatt taggatgtat ggagtcaaag gactgcaggc ttatatccgc aagcatgtcc 2520

agctgtccca tgagtttgag tcactggtgc gccaggatcc ccgctttgaa atctgtgtgg 2580

aagtcattct ggggcttgtc tgctttcggc taaagggttc caacaaagtg aatgaagctc 2640

ttctgcaaag aataaacagt gccaaaaaaa tccacttggt tccatgtcac ctcagggaca 2700

agtttgtcct gcgctttgcc atctgttctc gcacggtgga atctgcccat gtgcagcggg 2760

cctgggaaca catcaaagag ctggcggccg acgtgctgcg agcagagagg gagtaggagt 2820

gaagccagct gcaggaatca aaaattgaag agagatatat ctgaaaactg gaataagaag 2880

caaataaata tcatcctgcc ttcatggaac tcagctgtct gtggcttccc atgtctttct 2940

ccaaagttat ccagagggtt gtgattttgt ctgcttagta tctcatcaac aaagaaatat 3000

tatttgctaa ttaaaaagtt aatcttcatg gccatagctt ttattcatta gctgtgattt 3060

ttgttgatta aaacattata gattttcatg ttcttgcagt catcagaagt ggtaggaaag 3120

cctcactgat atattttcca gggcaatcaa tgttcacgca acttgaaatt atatctgtgg 3180

tcttcaaatt gtcttttgtc atgtggctaa atgcctaata agctgctcga gagatctacg 3240

ggtggcatcc ctgtgacccc tccccagtgc ctctcctggc cctggaagtt gccactccag 3300

tgcccaccag ccttgtccta ataaaattaa gttgcatcat tttgtctgac taggtgtcct 3360

tctataatat tatggggtgg aggggggtgg tatggagcaa ggggcaagtt gggaagacaa 3420

cctgtagggc ctgcggggtc tattgggaac caagctggag tgcagtggca caatcttggc 3480

tcactgcaat ctccgcctcc tgggttcaag cgattctcct gcctcagcct cccgagttgt 3540

tgggattcca ggcatgcatg accaggctca gctaattttt gtttttttgg tagagacggg 3600

gtttcaccat attggccagg ctggtctcca actcctaatc tcaggtgatc tacccacctt 3660

ggcctcccaa attgctggga ttacaggcgt gaaccactgc tcccttccct gtccttctga 3720

ttttgtaggt aaccgtaacc ccggaccacg tgcggaccga gcggccgctc tagagcatgg 3780

ctacgtagat aagtagcatg gcgggttaat cattaactac aaggaacccc tagtgatgga 3840

gttggccact ccctctctgc gcgctcgctc gctcactgag gccgggcgac caaaggtcgc 3900

ccgacgcccg ggcggcctca gtgagcgagc gagcgcgcag 3940

<210> 9
<211> 4079
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 9
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct tgtagttaat gattaacccg ccatgctact tatctacgta gccatgctct 180

agagcggccg caacgcgtaa acttcgtcga cgatctgcgg ccgcacgcgt ggagctagtt 240

attaatagta atcaattacg gggtcattag ttcatagccc atatatggag ttccgcgtta 300

cataacttac ggtaaatggc ccgcctggct gaccgcccaa cgacccccgc ccattgacgt 360

caataatgac gtatgttccc atagtaacgt caatagggac tttccattga cgtcaatggg 420

tggagtattt acggtaaact gcccacttgg cagtacatca agtgtatcat atgccaagta 480

cgcccccctat tgacgtcaat gacggtaaat ggcccgcctg gcattatgcc cagtacatga 540

ccttatggga ctttcctact tggcagtaca tctacgtatt agtcatcgct attaccatgg 600

tgatgcggtt ttggcagtac atcaatgggc gtggatagcg gtttgactca cggggatttc 660

caagtctcca ccccattgac gtcaatggga gtttgttttg caccaaaatc aacgggactt 720

tccaaaatgt cgtaacaact ccgccccatt gacgcaaatg ggcggtaggc gtgtacggtg 780

ggaggtctat ataagcagag ctcgtttagt gaaccgtcag atcgcctgga gacgccatcc 840

acgctgtttt gacctccata gaagacaccg ggaccgatcc agcctccgcg gattcgaatc 900

ccggccggga acggtgcatt ggaacgcgga ttccccgtgc caagagtgac gtaagtaccg 960

cctatagagt ctataggccc acaaaaaatg ctttcttctt ttaatatact tttttgttta 1020

tcttatttct aatactttcc ctaatctctt tctttcaggg caataatgat acaatgtatc 1080

atgcctcttt gcaccattct aaagaataac agtgataatt tctgggttaa ggcaatagca 1140

atatttctgc atataaatat ttctgcatat aaattgtaac tgatgtaaga ggtttcatat 1200

tgctaatagc agctacaatc cagctaccat tctgctttta ttttatggtt gggataaggc 1260

tggattattc tgagtccaag ctaggccctt ttgctaatca tgttcatacc tcttatcttc 1320

ctcccacagc tcctgggcaa cgtgctggtc tgtgtgctgg cccatcactt tggcaaagaa 1380

ttgggattcg aacatcgaat tcgggcacga gggaggacag agagcaagtc actcccggct 1440

gccttttca cctctgacag agcccagaca ccatgaacgc aagtgaattc cgaaggagag 1500

ggaaggagat ggtggattac gtggccaact acatggaagg cattgaggga cgccaggtct 1560

accctgacgt ggagcccggg tacctgcggc cgctgatccc tgccgctgcc cctcaggagc 1620

cagacacgtt tgaggacatc atcaacgacg ttgagaagat aatcatgcct ggggtgacgc 1680

actggcacag cccctacttc ttcgcctact tccccactgc cagctcgtac ccggccatgc 1740

ttgcggacat gctgtgcggg gccattggct gcatcggctt ctcctgggcg gcaagcccag 1800

catgcacaga gctggagact gtgatgatgg actggctcgg gaagatgctg gaactaccaa 1860

aggcattttt gaatgagaaa gctggagaag ggggaggagt gatccaggga agtgccagtg 1920

aagccaccct ggtggccctg ctggccgctc ggaccaaagt gatccatcgg ctgcaggcag 1980

cgtccccaga gctcacacag gccgctatca tggagaagct ggtggcttac tcatccgatc 2040

aggcacactc ctcagtggaa agagctgggt taattggtgg agtgaaatta aaagccatcc 2100

cctcagatgg caacttcgcc atgcgtgcgt ctgccctgca ggaagccctg gagagagaca 2160

aagcggctgg cctgattcct ttctttatgg ttgccaccct ggggaccaca acatgctgct 2220

cctttgacaa tctcttagaa gtcggtccta tctgcaacaa ggaagacata tggctgcacg 2280

ttgatgcagc ctacgcaggc agtgcattca tctgccctga gttccggcac cttctgaatg 2340

gagtggagtt tgcagattca ttcaacttta atccccacaa atggctattg gtgaattttg 2400

actgttctgc catgtgggtg aaaaagagaa cagacttaac gggagccttt agactggacc 2460

ccacttacct gaagcacagc catcaggatt cagggcttat cactgactac cggcattggc 2520

agataccact gggcagaaga tttcgctctt tgaaaatgtg gtttgtattt aggatgtatg 2580

gagtcaaagg actgcaggct tatatccgca agcatgtcca gctgtcccat gagtttgagt 2640

cactggtgcg ccaggatccc cgctttgaaa tctgtgtgga agtcattctg gggcttgtct 2700

gctttcggct aaagggttcc aacaaagtga atgaagctct tctgcaaaga ataaacagtg 2760

ccaaaaaaat ccacttggtt ccatgtcacc tcagggacaa gtttgtcctg cgctttgcca 2820

tctgttctcg cacggtggaa tctgcccatg tgcagcgggc ctgggaacac atcaaagagc 2880

tggcggccga cgtgctgcga gcagagaggg agtaggagtg aagccagctg caggaatcaa 2940

aaattgaaga gagatatatc tgaaaactgg aataagaagc aaataaatat catcctgcct 3000

tcatggaact cagctgtctg tggcttccca tgtctttctc caaagttatc cagagggttg 3060

tgattttgtc tgcttagtat ctcatcaaca aagaaatatt atttgctaat taaaaagtta 3120

atcttcatgg ccatagcttt tattcattag ctgtgatttt tgttgattaa aacattatag 3180

attttcatgt tcttgcagtc atcagaagtg gtaggaaagc ctcactgata tattttccag 3240

ggcaatcaat gttcacgcaa cttgaaatta tatctgtggt cttcaaattg tcttttgtca 3300

tgtggctaaa tgcctaataa acaattcaag tgaaatacta aaaaaaaaaa aaaaaaaaaa 3360

agctgctcga gagatctacg ggtggcatcc ctgtgacccc tccccagtgc ctctcctggc 3420

cctggaagtt gccactccag tgcccaccag ccttgtccta ataaaattaa gttgcatcat 3480

tttgtctgac taggtgtcct tctataatat tatggggtgg aggggggtgg tatggagcaa 3540

ggggcaagtt gggaagacaa cctgtagggc ctgcggggtc tattgggaac caagctggag 3600

tgcagtggca caatcttggc tcactgcaat ctccgcctcc tgggttcaag cgattctcct 3660

gcctcagcct cccgagttgt tgggattcca ggcatgcatg accaggctca gctaattttt 3720

gtttttttgg tagagacggg gtttcaccat attggccagg ctggtctcca actcctaatc 3780

tcaggtgatc tacccacctt ggcctcccaa attgctggga ttacaggcgt gaaccactgc 3840

tcccttccct gtccttctga ttttgtaggt aacgtaaccc cggaccacgt gcggaccgag 3900

cggccgctct agagcatggc tacgtagata agtagcatgg cgggttaatc attaactaca 3960

aggaacccct agtgatggag ttggccactc cctctctgcg cgctcgctcg ctcactgagg 4020

ccgggcgacc aaaggtcgcc cgacgcccgg gcggcctcag tgagcgagcg agcgcgcag 4079

<210> 10
<211> 9266
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 10
gagaggcggt ttgcgtattg ggcgctcttc cgcttcctcg ctcactgact cgctgcgctc 60

ggtcgttcgg ctgcggcgag cggtatcagc tcactcaaag gcggtaatac ggttatccac 120

agaatcaggg gataacgcag gaaagaacat gtgagcaaaa ggccagcaaa aggccaggaa 180

ccgtaaaaag gccgcgttgc tggcgttttg agatcctttt tttctgcgcg taatctgctg 240

cttgcaaaca aaaaaaccac cgctaccagc ggtggtttgt ttgccggatc aagagctacc 300

aactcttttt ccgaaggtaa ctggcttcag cagagcgcag ataccaaata ctgttcttct 360

agtgtagccg tagttaggcc accacttcaa gaactctgta gcaccgccta catacctcgc 420

tctgctaatc ctgttaccag tggctgctgc cagtggcgat aagtcgtgtc ttaccgggtt 480

ggactcaaga cgatagttac cggataaggc gcagcggtcg ggctgaacgg ggggttcgtg 540

cacacagccc agcttggagc gaacgaccta caccgaactg agatacctac agcgtgagct 600

atgagaaagc gccacgcttc ccgaagggag aaaggcggac aggtatccgg taagcggcag 660

ggtcggaaca ggagagcgca cgagggagct tccagggga aacgcctggt atctttatag 720

tcctgtcggg tttcgccacc tctgacttga gcgtcgattt ttgtgatgct cgtcaggggg 780

gcggagccta tggaaagaag atcctttgat cttttctacg gggtctgacg ctcagtggaa 840

cgaaaactca cgttaaggga ttttggtcat gagattatca aaaaggatct tcacctagat 900

ccttttaaat taaaaatgaa gttttaaatc aagcccaatc tgaataatgt tacaaccaat 960

taaccaattc tgaaaacgcg cgatgcagct ctggcccgtg tctcaaaatc tctgatgtta 1020

cattgcacaa gataaaaata tatcatcatg aacaataaaa ctgtctgctt acataaacag 1080

taatacaagg ggtgttatga gccatattca acgggaaacg tcgaggccgc gattaaattc 1140

caacatggat gctgatttat atgggtataa atgggctcgc gataatgtcg ggcaatcagg 1200

tgcgacaatc tatcgcttgt atgggaagcc cgatgcgcca gagttgtttc tgaaacatgg 1260

caaaggtagc gttgccaatg atgttacaga tgagatggtc agactaaact ggctgacgga 1320

atttatgcct cttccgacca tcaagcattt tatccgtact cctgatgatg catggttact 1380

caccactgcg atccccggaa aaacagcatt ccaggtatta gaagaatatc ctgattcagg 1440

tgaaaatatt gttgatgcgc tggcagtgtt cctgcgccgg ttgcattcga ttcctgtttg 1500

taattgtcct tttaacagcg atcgcgtatt tcgtctcgct caggcgcaat cacgaatgaa 1560

taacggtttg gttgatgcga gtgattttga tgacgagcgt aatggctggc ctgttgaaca 1620

agtctggaaa gaaatgcata aacttttgcc attctcaccg gattcagtcg tcactcatgg 1680

tgatttctca cttgataacc ttatttttga cgaggggaaa ttaataggtt gtattgatgt 1740

tggacgagtc ggaatcgcag accgatacca ggatcttgcc atcctatgga actgcctcgg 1800

tgagttttct ccttcattac agaaacggct ttttcaaaaa tatggtattg ataatcctga 1860

tatgaataaa ttgcagtttc atttgatgct cgatgagttt ttctaatcag aattggttaa 1920

ttggttgtaa cattattcag attgggcttg atttaaaact tcatttttaa tttaaaagga 1980

tctaggtgaa gatccttttt gataatctca tgaccaaaat cccttaacgt gagttttcgt 2040

tccactgagc gtcagacccc gtagaaaaga tcaaaggatc ttcaacaccc cttgtattac 2100

tgtttatgta agcagacagt tttattgttc atgatgatat atttttatct tgtgcaatgt 2160

aacatcagag attttgagac acgggccaga gctgcatcgc gcgtttcggt gatgacggtg 2220

aaaacctctg acacatgcag ctcccgtatc tggaggctat aaatgattac gatacttcga 2280

aaacatcctt atcctggaaa actccccgtt catttcccac tctcctgcca ttcgacactc 2340

gtgcgtccat tcaagtctgt gctaatttct acgcatttcc ctctgccatt gactttgctt 2400

gcgtgggata ataactatta agccaacttg attcaactca ggcattcaaa aggcattttg 2460

attagtcgaa aagtggcacg gctgacgagt ggagctgcca tttcacgttt atttcgaact 2520

tttgattaca tggtatattt agtaatacac atatttttta gccagcaggt taatacttca 2580

aagttgtttc gattttcaac gaataaaagg aatttggcat ggtgtttttt ctggtctttg 2640

gtattgacaa atcagggata tacaatatgt attaacaaaa ttggattgct acatatattt 2700

aatgattttc attattagaa tgggtggaat aaagttttaa attacattat taatttcatt 2760

agggttggct gattgattac tatttcctca ttgaattgca ttcgatatta gcagtattta 2820

tctggcccat tttggaagtt acttaaattt cgaaccttaa gtcattatta gagctaatat 2880

acaacagagt tgtcaacttg gtttgatcag cattgaaatt aaactgattt cttgttcgtt 2940

cttatttcgt ttggttttgt atctcgtatt ttatatgcag gagggcatat attggcacaa 3000

gacaaataat cacagcaccc attctcaact ttgtcctgtt tctcagttta gtgtaaatag 3060

aatgttgcaa aaaattgaat ataagcatta tcatagtgtc aaattcgaga ggatgagttt 3120

gctgtgggtc ttcgaggttc tttccctgtg tttgccacgg ttcgttgcac gttgccactg 3180

attggacaca tgtccgcagt gaaaaatcta cggtcaggta ccacccaact aaaccggaag 3240

gcggcacgtg tgtgggcgtt gagcggtgtg ggcgtggcag ccatataatg agacatttat 3300

ttaaaaagaa cattcgaaca tttttgatgg gccatatctt ggcttgtcaa gctccagggc 3360

agacattttc ctcgactcca ccgccttttt catttgaatg gaggaggtgt agggcacaaa 3420

aaacgtttcc tgccttttta agcagcacaa aggatatgag ccattaaatt agttaatttc 3480

gagtgcattt cattttaaat aagtgttgga aagggaataa aaaagcgact gatagaaaag 3540

ttgcagacac caagagaatg ttaaatattt taataatagc tacatttttc tatctctgtg 3600

acaaggcctg tgtactttaa tgttatatta cttctttgtg tttgatttct gttaaaagtt 3660

tatgattttg gcatgtacaa atcttacaac ccttttttgt catcatgaca aaatcaaaat 3720

cgtgcaatat ttccattctc atcttttagc cgattcataa cattcgtaga aattaatatg 3780

aaatcaatca tgtataattt tcatgcacgt tatgccgatt tggtatcgtc gatttgccgg 3840

ctcatcgtcg ccattgtgtt aatggaaaag ttatgctttt cgcaggaaaa aagagttgaa 3900

aattccaatt tttgtcatgc tcatcaaaat gttatacatt cggtaatttg agctggccaa 3960

acgttaaccc cttatcgccc cgcgcaagca ttcattaact gcccccagag cgtaattaat 4020

ctctttctcg cagaatttcc ttcacagcca cgtcttgggt aaaagtcacc cctcaaagtg 4080

gcagttgcat gttgtaaatt agattttcgt ccgtcatgac aaccctcgtg cgagggttgc 4140

tgcagcattt gaatgcaaaa ctgcttttgg tcattaacct gtctgaggca ctttgctgca 4200

aaacttctat tagaattcgg tttggactcg aattcggatt tcttccccca aaatgcgatg 4260

gctacagcaa aatgctttca gcttccgaag ttttgcaacc ccaaagtcca gagtttccac 4320

gctgtcacga ttccaaagcg gcgccatttt tggctcacgc aaaacttatt aatgaacttt 4380

aagcagacta cgaggaaagg gctataatgg ccacacaaaa gggttaagca agtgttaagg 4440

gctggtggga gggaaaaatc atcaatcata ttttctgcat agctgaatca tttgcgccga 4500

tcagttgggg ttacttaatg ggtttatttc aagaagaaaa ctgtgggaaa ctaactgact 4560

ctaaacttaa tcagattaaa tgtaacctgg agatgatttt caaaatatta aaagagtttt 4620

atggaggtaa ttttaaagaa aactgaaaaa ctttgaagaa gtctataata gatccagtct 4680

taatcgtagc actgattatt tgtttttaaa ttggaaaaaa ttaaatgata catcatgctt 4740

aaatgcgatg tccaacaaat cccaagacgg taatttccgt gcgttccaaa ctcatctgaa 4800

gaatcttaca aatacatttc gtgtatcccc aggctcagcg tgcaaataaa tcttttggat 4860

ctttgcaaat gcgaaatgct tatttttatg cgttttcaat gccaattcga tggcaaaacc 4920

aacaaaatca catggaaata atggaaaagc aatttccatt tctacaaggg aggcagtgag 4980

acacaagagc agcgtataca attccccagc agcgatttga ccattaaaat tatacccaca 5040

ggacgagcag gcataaaaag cagaggatgc gaggtgttca ggggactgtc tatatctcca 5100

acttgaatat atgaaatcgt ttggaaatag ccaagcgacc aaattggcat ttggaaaatt 5160

gcacaacgac agaagaagat gtttgaaaag agaaattgaa ataataaacc aagatatatg 5220

taaacggttg gtcacatttg ggttctgaga cggtcacagc ttgtctgtaa gcggatgccg 5280

ggagcagaca agcccgtcag ggcgcgtcag cgggtgttgg cgggtgtcgg ggctggctta 5340

actatgcggc atcagagcag attgtactga gagtgcacca tatgcggtgt gaaataccgc 5400

acagatgcgt aaggagaaaa taccgcatca ggcgccattc gccattcagg ctgcgcaact 5460

gttgggaagg gcgatcggtg cgggcctctt cgctattacg ccagctggcg aaaggggat 5520

gtgctgcaag gcgattaagt tgggtaacgc cagggttttc ccagtcacga cgttgtaaaa 5580

cgacggccag tgaattcgag ctcggtacca tttaaatcgt cttggccact ccctctctgc 5640

gcgctcgctc gctcactgag gccgcccggg caaagcccgg gcgtcgggcg acctttggtc 5700

gcccggcctc agtgagcgag cgagcgcgca gagagggagt ggccaactcc atcactaggg 5760

gttccttcgc gagcttaatt aactgcggcc gctcggtccg cacgtggtta cctacaaaat 5820

cagaaggaca gggaagggag cagtggttca cgcctgtaat cccagcaatt tgggaggcca 5880

aggtgggtag atcacctgag attaggagtt ggagaccagc ctggccaata tggtgaaacc 5940

ccgtctctac caaaaaaaca aaaattagct gagcctggtc atgcatgcct ggaatcccaa 6000

caactcggga ggctgaggca ggagaatcgc ttgaacccag gaggcggaga ttgcagtgag 6060

ccaagattgt gccactgcac tccagcttgg ttcccaatag accccgcagg ccctacaggt 6120

tgtcttccca acttgcccct tgctccatac cacccccctc caccccataa tattatagaa 6180

ggacacctag tcagacaaaa tgatgcaact taattttatt aggacaaggc tggtgggcac 6240

tggagtggca acttccaggg ccaggagagg cactggggag gggtcacagg gatgccaccc 6300

gtagatctct cgagcagctc actcctactc cctctctgct cgcagcacgt cggccgccag 6360

ctctttgatg tgttcccagg cccgctgcac atgggcagat tccaccgtgc gagaacagat 6420

ggcaaagcgc aggacaaact tgtccctgag gtgacatgga accaagtgga ttttttggc 6480

actgtttatt ctttgcagaa gagcttcatt cactttgttg gaacccttta gccgaaagca 6540

gacaagcccc agaatgactt ccacacagat ttcaaagcgg ggatcctggc gcaccagtga 6600

ctcaaactca tgggacagct ggacatgctt gcggatataa gcctgcagtc ctttgactcc 6660

atacatccta aatacaaacc acattttcaa agagcgaaat cttctgccca gtggtatctg 6720

ccaatgccgg tagtcagtga taagccctga atcctgatgg ctgtgcttca ggtaagtggg 6780

gtccagtcta aaggctcccg ttaagtctgt tctctttttc acccacatgg cagaacagtc 6840

aaaattcacc aatagccatt tgtggggatt aaagttgaat gaatctgcaa actccactcc 6900

attcagaagg tgccggaact cagggcagat gaatgcactg cctgcgtagg ctgcatcaac 6960

gtgcagccat atgtcttcct tgttgcagat aggaccgact tctaagagat tgtcaaagga 7020

gcagcatgtt gtggtcccca gggtggcaac cataaagaaa ggaatcaggc cagccgcttt 7080

gtctctctcc agggcttcct gcagggcaga cgcacgcatg gcgaagttgc catctgaggg 7140

gatggctttt aatttcactc caccaattaa cccagctctt tccactgagg agtgtgcctg 7200

atcggatgag taagccacca gcttctccat gatagcggcc tgtgtgagct ctggggacgc 7260

tgcctgcagc cgatggatca ctttggtccg agcggccagc agggccacca gggtggcttc 7320

actggcactt ccctggatca ctcctccccc ttctccagct ttctcattca aaaatgcctt 7380

tggtagttcc agcatcttcc cgagccagtc catcatcaca gtctccagct ctgtgcatgc 7440

tgggcttgcc gcccaggaga agccgatgca gccaatggcc ccgcacagca tgtccgcaag 7500

catggccggg tacgagctgg cagtggggaa gtaggcgaag aagtaggggc tgtgccagtg 7560

cgtcacccca ggcatgatta tcttctcaac gtcgttgatg atgtcctcaa acgtgtctgg 7620

ctcctgaggg gcagcggcag ggatcagcgg ccgcaggtac ccgggctcca cgtcagggta 7680

gacctggcgt ccctcaatgc cttccatgta gttggccacg taatccacca tctccttccc 7740

tctccttcgg aattcacttg cgttcatggt ggcggccgat gttcgaatcc caattctttg 7800

ccaaagtgat gggccagcac acagaccagc acgttgccca ggagctgtgg gaggaagata 7860

agaggtatga acatgattag caaaagggcc tagcttggac tcagaataat ccagccttat 7920

cccaaccata aaataaaagc agaatggtag ctggattgta gctgctatta gcaatatgaa 7980

acctcttaca tcagttacaa tttatatgca gaaatattta tatgcagaaa tattgctatt 8040

gccttaaccc agaaattatc actgttattc tttagaatgg tgcaaagagg catgatacat 8100

tgtatcatta ttgccctgaa agaaagagat tagggaaagt attagaaata agataaacaa 8160

aaaagtatat taaaagaaga aagcattttt tgtgggccta tagactctat aggcggtact 8220

tacgtcactc ttggcacggg gaatccgcgt tccaatgcac cgttcccggc cgggattcga 8280

atccgcggag gctggatcgg tcccggtgtc ttctatggag gtcaaaacag cgtggatggc 8340

gtctccaggc gatctgacgg ttcactaaac gagctctgct tatatagacc tcccaccgta 8400

cacgcctacc gcccatttgc gtcaatgggg cggagttgtt acgacatttt ggaaagtccc 8460

gttgattttg gtgcaaaaca aactcccatt gacgtcaatg gggtggagac ttggaaatcc 8520

ccgtgagtca aaccgctatc cacgcccatt gatgtactgc caaaaccgca tcaccatggt 8580

aatagcgatg actaatacgt agatgtactg ccaagtagga aagtcccata aggtcatgta 8640

ctgggcataa tgccaggcgg gccatttacc gtcattgacg tcaatagggg gcgtacttgg 8700

catatgatac acttgatgta ctgccaagtg ggcagtttac cgtaaatact ccacccattg 8760

acgtcaatgg aaagtcccta ttgacgttac tatgggaaca tacgtcatta ttgacgtcaa 8820

tgggcggggg tcgttgggcg gtcagccagg cgggccattt accgtaagtt atgtaacgcg 8880

gaactccata tatgggctat gaactaatga ccccgtaatt gattactatt aataactagc 8940

tccacgcgtg cggccgcaga tcgtcgacga agtttaaact caggaacccc tagtgatgga 9000

gttggccact ccctctctgc gcgctcgctc gctcactgag gccgcccggg caaagcccgg 9060

gcgtcgggcg acctttggtc gcccggcctc agtgagcgag cgagcgcgca gagagggagt 9120

ggccaacgtc atttaaatgc atgcaagctt ggcgtaatca tggtcatagc tgtttcctgt 9180

gtgaaaattg cgttgcgctc actgcccgct ttccagtcgg gaaacctgtc gtgccagctg 9240

cattaatgaa tcggccaacg cgcggg 9266

<210> 11
<211> 9236
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 11
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg cagctgcgcg ctcgctcgct cactgaggcc gcccgggcaa 180

agcccgggcg tcgggcgacc tttggtcgcc cggcctcagt gagcgagcga gcgcgcagag 240

agggagtggc caactccatc actaggggtt gagtttaaac ttcgtcgacg atctgcggcc 300

gcacgcgtgg agctagttat taatagtaat caattacggg gtcattagtt catagcccat 360

atatggagtt ccgcgttaca taacttacgg taaatggccc gcctggctga ccgcccaacg 420

acccccgccc attgacgtca ataatgacgt atgttcccat agtaacgtca atagggactt 480

tccattgacg tcaatgggtg gagtatttac ggtaaactgc ccacttggca gtacatcaag 540

tgtatcatat gccaagtacg ccccctattg acgtcaatga cggtaaatgg cccgcctggc 600

attatgccca gtacatgacc ttatgggact ttcctacttg gcagtacatc tacgtattag 660

tcatcgctat taccatggtg atgcggtttt ggcagtacat caatgggcgt ggatagcggt 720

ttgactcacg gggatttcca agtctccacc ccattgacgt caatgggagt ttgttttgca 780

ccaaaatcaa cgggactttc caaaatgtcg taacaactcc gccccattga cgcaaatggg 840

cggtaggcgt gtacggtggg aggtctatat aagcagagct cgtttagtga accgtcagat 900

cgcctggaga cgccatccac gctgttttga cctccataga agacaccggg accgatccag 960

cctccgcgga ttcgaatccc ggccgggaac ggtgcattgg aacgcggatt ccccgtgcca 1020

agagtgacgt aagtaccgcc tatagagtct ataggcccac aaaaaatgct ttcttctttt 1080

aatatacttt tttgtttatc ttatttctaa tactttccct aatctctttc tttcagggca 1140

ataatgatac aatgtatcat gcctctttgc accattctaa agaataacag tgataatttc 1200

tgggttaagg caatagcaat atttctgcat ataaatattt ctgcatataa attgtaactg 1260

atgtaagagg tttcatattg ctaatagcag ctacaatcca gctaccattc tgcttttatt 1320

ttatggttgg gataaggctg gattattctg agtccaagct aggccctttt gctaatcatg 1380

ttcatacctc ttatcttcct cccacagctc ctgggcaacg tgctggtctg tgtgctggcc 1440

catcactttg gcaaagaatt gggattcgaa catcggccgc caccatgaac gcaagtgaat 1500

tccgaaggag agggaaggag atggtggatt acgtggccaa ctacatggaa ggcattgagg 1560

gacgccaggt ctaccctgac gtggagcccg ggtacctgcg gccgctgatc cctgccgctg 1620

cccctcagga gccagacacg tttgaggaca tcatcaacga cgttgagaag ataatcatgc 1680

ctggggtgac gcactggcac agcccctact tcttcgccta cttccccact gccagctcgt 1740

acccggccat gcttgcggac atgctgtgcg gggccattgg ctgcatcggc ttctcctggg 1800

cggcaagccc agcatgcaca gagctggaga ctgtgatgat ggactggctc gggaagatgc 1860

tggaactacc aaaggcattt ttgaatgaga aagctggaga agggggagga gtgatccagg 1920

gaagtgccag tgaagccacc ctggtggccc tgctggccgc tcggaccaaa gtgatccatc 1980

ggctgcaggc agcgtcccca gagctcacac aggccgctat catggagaag ctggtggctt 2040

actcatccga tcaggcacac tcctcagtgg aaagagctgg gttaattggt ggagtgaaat 2100

taaaagccat cccctcagat ggcaacttcg ccatgcgtgc gtctgccctg caggaagccc 2160

tggagagaga caaagcggct ggcctgattc ctttctttat ggttgccacc ctggggacca 2220

caacatgctg ctcctttgac aatctcttag aagtcggtcc tatctgcaac aaggaagaca 2280

tatggctgca cgttgatgca gcctacgcag gcagtgcatt catctgccct gagttccggc 2340

accttctgaa tggagtggag tttgcagatt cattcaactt taatccccac aaatggctat 2400

tggtgaattt tgactgttct gccatgtggg tgaaaaagag aacagactta acgggagcct 2460

ttagactgga ccccacttac ctgaagcaca gccatcagga ttcagggctt atcactgact 2520

accggcattg gcagatacca ctgggcagaa gatttcgctc tttgaaaatg tggtttgtat 2580

ttaggatgta tggagtcaaa ggactgcagg cttatatccg caagcatgtc cagctgtccc 2640

atgagtttga gtcactggtg cgccaggatc cccgctttga aatctgtgtg gaagtcattc 2700

tggggcttgt ctgctttcgg ctaaagggtt ccaacaaagt gaatgaagct cttctgcaaa 2760

gaataaacag tgccaaaaaa atccacttgg ttccatgtca cctcagggac aagtttgtcc 2820

tgcgctttgc catctgttct cgcacggtgg aatctgccca tgtgcagcgg gcctgggaac 2880

acatcaaaga gctggcggcc gacgtgctgc gagcagagag ggagtaggag tgagctgctc 2940

gagagatcta cgggtggcat ccctgtgacc cctccccagt gcctctcctg gccctggaag 3000

ttgccactcc agtgcccacc agccttgtcc taataaaatt aagttgcatc attttgtctg 3060

actaggtgtc cttctataat attatggggt ggaggggggt ggtatggagc aaggggcaag 3120

ttgggaagac aacctgtagg gcctgcgggg tctattggga accaagctgg agtgcagtgg 3180

cacaatcttg gctcactgca atctccgcct cctgggttca agcgattctc ctgcctcagc 3240

ctcccgagtt gttgggattc caggcatgca tgaccaggct cagctaattt ttgtttttt 3300

ggtagagacg gggtttcacc atattggcca ggctggtctc caactcctaa tctcaggtga 3360

tctacccacc ttggcctccc aaattgctgg gattacaggc gtgaaccact gctcccttcc 3420

ctgtccttct gattttgtag gtaaccacgt gcggaccgag cggccgcagt taattaagct 3480

cgcgaaaccc ctagtgatgg agttggccac tccctctctg cgcgctcgct cgctcactga 3540

ggccgggcga ccaaaggtcg cccgacgccc gggctttgcc cgggcggcct cagtgagcga 3600

gcgagcgcgc agctggacga tttaaatggt accgagctcg aattcactgg ccgtcgtttt 3660

acaacgtcgt gactgggaaa accctggcgt tacccaactt aatcgccttg cagcacatcc 3720

ccctttcgcc agctggcgta atagcgaaga ggcccgcacc gatcgccctt cccaacagtt 3780

gcgcagcctg aatggcgaat ggcgcctgat gcggtatttt ctccttacgc atctgtgcgg 3840

tatttcacac cgcatatggt gcactctcag tacaatctgc tctgatgccg catagttaag 3900

ccagccccga cacccgccaa cacccgctga cgcgccctga cgggcttgtc tgctcccggc 3960

atccgcttac agacaagctg tgaccgtctc agaacccaaa tgtgaccaac cgtttacata 4020

tatcttggtt tattatttca atttctcttt tcaaacatct tcttctgtcg ttgtgcaatt 4080

ttccaaatgc caatttggtc gcttggctat ttccaaacga tttcatatat tcaagttgga 4140

gatatagaca gtcccctgaa cacctcgcat cctctgcttt ttatgcctgc tcgtcctgtg 4200

ggtataattt taatggtcaa atcgctgctg gggaattgta tacgctgctc ttgtgtctca 4260

ctgcctccct tgtagaaatg gaaattgctt ttccattatt tccatgtgat tttgttggtt 4320

ttgccatcga attggcattg aaaacgcata aaaataagca tttcgcattt gcaaagatcc 4380

aaaagattta tttgcacgct gagcctgggg atacacgaaa tgtatttgta agattcttca 4440

gatgagtttg gaacgcacgg aaattaccgt cttgggattt gttggacatc gcatttaagc 4500

atgatgtatc atttaatttt ttccaattta aaaacaaata atcagtgcta cgattaagac 4560

tggatctatt atagacttct tcaaagtttt tcagttttct ttaaaattac ctccataaaa 4620

ctcttttaat attttgaaaa tcatctccag gttacattta atctgattaa gtttagagtc 4680

agttagtttc ccacagtttt cttcttgaaa taaacccatt aagtaacccc aactgatcgg 4740

cgcaaatgat tcagctatgc agaaaatatg attgatgatt tttccctccc accagccctt 4800

aacacttgct taacccttttt gtgtggccat tatagccctt tcctcgtagt ctgcttaaag 4860

ttcattaata agttttgcgt gagccaaaaa tggcgccgct ttggaatcgt gacagcgtgg 4920

aaactctgga ctttggggtt gcaaaacttc ggaagctgaa agcattttgc tgtagccatc 4980

gcattttggg ggaagaaatc cgaattcgag tccaaaccga attctaatag aagttttgca 5040

gcaaagtgcc tcagacaggt taatgaccaa aagcagtttt gcattcaaat gctgcagcaa 5100

ccctcgcacg agggttgtca tgacggacga aaatctaatt tacaacatgc aactgccact 5160

ttgaggggtg acttttaccc aagacgtggc tgtgaaggaa attctgcgag aaagagatta 5220

attacgctct gggggcagtt aatgaatgct tgcgcggggc gataaggggt taacgtttgg 5280

ccagctcaaa ttaccgaatg tataacattt tgatgagcat gacaaaaatt ggaattttca 5340

actctttttt cctgcgaaaa gcataacttt tccattaaca caatggcgac gatgagccgg 5400

caaatcgacg ataccaaatc ggcataacgt gcatgaaaat tatacatgat tgatttcata 5460

ttaatttcta cgaatgttat gaatcggcta aaagatgaga atggaaatat tgcacgattt 5520

tgattttgtc atgatgacaa aaaagggttg taagatttgt acatgccaaa atcataaact 5580

tttaacagaa atcaaacaca aagaagtaat ataacattaa agtacacagg ccttgtcaca 5640

gagatagaaa aatgtagcta ttattaaaat atttaacatt ctcttggtgt ctgcaacttt 5700

tctatcagtc gctttttat tccctttcca acacttattt aaaatgaaat gcactcgaaa 5760

ttaactaatt taatggctca tatcctttgt gctgcttaaa aaggcaggaa acgttttttg 5820

tgccctacac ctcctccatt caaatgaaaa aggcggtgga gtcgaggaaa atgtctgccc 5880

tggagcttga caagccaaga tatggcccat caaaaatgtt cgaatgttct ttttaaataa 5940

atgtctcatt atatggctgc cacgcccaca ccgctcaacg cccacacacg tgccgccttc 6000

cggtttagtt gggtggtacc tgaccgtaga tttttcactg cggacatgtg tccaatcagt 6060

ggcaacgtgc aacgaaccgt ggcaaacaca gggaaagaac ctcgaagacc cacagcaaac 6120

tcatcctctc gaatttgaca ctatgataat gcttatattc aatttttgc aacattctat 6180

ttacactaaa ctgagaaaca ggacaaagtt gagaatgggt gctgtgatta tttgtcttgt 6240

gccaatatat gccctcctgc atataaaata cgagatacaa aaccaaacga aataagaacg 6300

aacaagaaat cagtttaatt tcaatgctga tcaaaccaag ttgacaactc tgttgtatat 6360

tagctctaat aatgacttaa ggttcgaaat ttaagtaact tccaaaatgg gccagataaa 6420

tactgctaat atcgaatgca attcaatgag gaaatagtaa tcaatcagcc aaccctaatg 6480

aaattaataa tgtaatttaa aactttattc cacccattct aataatgaaa atcattaaat 6540

atatgtagca atccaatttt gttaatacat attgtatatc cctgatttgt caataccaaa 6600

gaccagaaaa aacaccatgc caaattcctt ttattcgttg aaaatcgaaa caactttgaa 6660

gtattaacct gctggctaaa aaatatgtgt attactaaat ataccatgta atcaaaagtt 6720

cgaaataaac gtgaaatggc agctccactc gtcagccgtg ccacttttcg actaatcaaa 6780

atgccttttg aatgcctgag ttgaatcaag ttggcttaat agttattatc ccacgcaagc 6840

aaagtcaatg gcagagggaa atgcgtagaa attagcacag acttgaatgg acgcacgagt 6900

gtcgaatggc aggagagtgg gaaatgaacg gggagtttc caggataagg atgttttcga 6960

agtatcgtaa tcatttatag cctccagata cgggagctgc atgtgtcaga ggttttcacc 7020

gtcatcaccg aaacgcgcga tgcagctctg gcccgtgtct caaaatctct gatgttacat 7080

tgcacaagat aaaaatatat catcatgaac aataaaactg tctgcttaca taaacagtaa 7140

tacaaggggt gttgaagatc ctttgatctt ttctacgggg tctgacgctc agtggaacga 7200

aaactcacgt taagggattt tggtcatgag attatcaaaa aggatcttca cctagatcct 7260

tttaaattaa aaatgaagtt ttaaatcaag cccaatctga ataatgttac aaccaattaa 7320

ccaattctga ttagaaaaac tcatcgagca tcaaatgaaa ctgcaattta ttcatatcag 7380

gattatcaat accatatttt tgaaaaagcc gtttctgtaa tgaaggagaa aactcaccga 7440

ggcagttcca taggatggca agatcctggt atcggtctgc gattccgact cgtccaacat 7500

caatacaacc tattaatttc ccctcgtcaa aaataaggtt atcaagtgag aaatcaccat 7560

gagtgacgac tgaatccggt gagaatggca aaagtttatg catttctttc cagacttgtt 7620

caacaggcca gccattacgc tcgtcatcaa aatcactcgc atcaaccaaa ccgttattca 7680

ttcgtgattg cgcctgagcg agacgaaata cgcgatcgct gttaaaagga caattacaaa 7740

caggaatcga atgcaaccgg cgcaggaaca ctgccagcgc atcaacaata ttttcacctg 7800

aatcaggata ttcttctaat acctggaatg ctgtttttcc ggggatcgca gtggtgagta 7860

accatgcatc atcaggagta cggataaaat gcttgatggt cggaagaggc ataaattccg 7920

tcagccagtt tagtctgacc atctcatctg taacatcatt ggcaacgcta cctttgccat 7980

gtttcagaaa caactctggc gcatcgggct tcccatacaa gcgatagatt gtcgcacctg 8040

attgcccgac attatcgcga gcccatttat acccatataa atcagcatcc atgttggaat 8100

ttaatcgcgg cctcgacgtt tcccgttgaa tatggctcat aacacccctt gtattactgt 8160

ttatgtaagc agacagtttt attgttcatg atgatatatt tttatcttgt gcaatgtaac 8220

atcagagatt ttgagacacg ggccagagct gcatcgcgcg ttttcagaat tggttaattg 8280

gttgtaacat tattcagatt gggcttgatt taaaacttca tttttaattt aaaaggatct 8340

aggtgaagat ccttttttgat aatctcatga ccaaaatccc ttaacgtgag ttttcgttcc 8400

actgagcgtc agaccccgta gaaaagatca aaggatcttc tttccatagg ctccgccccc 8460

ctgacgagca tcacaaaaat cgacgctcaa gtcagaggtg gcgaaacccg acaggactat 8520

aaagatacca ggcgtttccc cctggaagct ccctcgtgcg ctctcctgtt ccgaccctgc 8580

cgcttaccgg atacctgtcc gcctttctcc cttcgggaag cgtggcgctt tctcatagct 8640

cacgctgtag gtatctcagt tcggtgtagg tcgttcgctc caagctgggc tgtgtgcacg 8700

aacccccgt tcagcccgac cgctgcgcct tatccggtaa ctatcgtctt gagtccaacc 8760

cggtaagaca cgacttatcg ccactggcag cagccactgg taacaggatt agcagagcga 8820

ggtatgtagg cggtgctaca gagttcttga agtggtggcc taactacggc tacactagaa 8880

gaacagtatt tggtatctgc gctctgctga agccagttac cttcggaaaa agagttggta 8940

gctcttgatc cggcaaacaa accaccgctg gtagcggtgg ttttttttgtt tgcaagcagc 9000

agattacgcg cagaaaaaaa ggatctcaaa acgccagcaa cgcggccttt ttacggttcc 9060

tggccttttg ctggcctttt gctcacatgt tctttcctgc gttatcccct gattctgtgg 9120

ataaccgtat taccgccttt gagtgagctg ataccgctcg ccgcagccga acgaccgagc 9180

gcagcgagtc agtgagcgag gaagcggaag agcgcccaat acgcaaaccg cctctc 9236

<210> 12
<211> 6260
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 12
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg ttggccactc cctctctgcg cgctcgctcg ctcactgagg 180

ccgggcgacc aaaggtcgcc cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc 240

gagcgcgcag agagggagtg gccaactcca tcactagggg ttcctgagtt taaacttcgt 300

cgacgatctg cggccgcacg cgtggagcta gttattaata gtaatcaatt acggggtcat 360

tagttcatag cccatatatg gagttccgcg ttacataact tacggtaaat ggcccgcctg 420

gctgaccgcc caacgacccc cgcccattga cgtcaataat gacgtatgtt cccatagtaa 480

cgtcaatagg gactttccat tgacgtcaat gggtggagta tttacggtaa actgcccact 540

tggcagtaca tcaagtgtat catatgccaa gtacgccccc tattgacgtc aatgacggta 600

aatggcccgc ctggcattat gcccagtaca tgaccttatg ggactttcct acttggcagt 660

acatctacgt attagtcatc gctattacca tggtgatgcg gttttggcag tacatcaatg 720

ggcgtggata gcggtttgac tcacggggat ttccaagtct ccaccccatt gacgtcaatg 780

ggagtttgtt ttgcaccaaa atcaacggga ctttccaaaa tgtcgtaaca actccgcccc 840

attgacgcaa atgggcggta ggcgtgtacg gtgggaggtc tatataagca gagctcgttt 900

agtgaaccgt cagatcgcct ggagacgcca tccacgctgt tttgacctcc atagaagaca 960

ccgggaccga tccagcctcc gcggattcga atcccggccg ggaacggtgc attggaacgc 1020

ggattccccg tgccaagagt gacgtaagta ccgcctatag agtctatagg cccacaaaaa 1080

atgctttctt cttttaatat actttttttgt ttatcttatt tctaatactt tccctaatct 1140

ctttctttca gggcaataat gatacaatgt atcatgcctc tttgcaccat tctaaagaat 1200

aacagtgata atttctgggt taaggcaata gcaatatttc tgcatataaa tatttctgca 1260

tataaattgt aactgatgta agaggtttca tattgctaat agcagctaca atccagctac 1320

cattctgctt ttattttatg gttgggataa ggctggatta ttctgagtcc aagctaggcc 1380

cttttgctaa tcatgttcat acctcttatc ttcctcccac agctcctggg caacgtgctg 1440

gtctgtgtgc tggcccatca ctttggcaaa gaattgggat tcgaacatcg gccgccacca 1500

tgaacgccag cgagttcagg aggaggggca aggagatggt ggactacgtg gccaactaca 1560

tggagggcat cgagggcagg caggtgtacc ccgacgtgga gcccggctac ctgaggcccc 1620

tgatccccgc cgccgccccc caggagcccg acaccttcga ggacatcatc aacgacgtgg 1680

agaagatcat catgcccggc gtgacccact ggcacagccc ctacttcttc gcctacttcc 1740

ccaccgccag cagctacccc gccatgctgg ccgacatgct gtgcggcgcc atcggctgca 1800

tcggcttcag ctgggccgcc agccccgcct gcaccgagct ggagaccgtg atgatggact 1860

ggctgggcaa gatgctggag ctgcccaagg ccttcctgaa cgagaaggcc ggcgagggcg 1920

gcggcgtgat ccagggcagc gccagcgagg ccaccctggt ggccctgctg gccgccagga 1980

ccaaggtgat ccacaggctg caggccgcca gccccgagct gacccaggcc gccatcatgg 2040

agaagctggt ggcctacagc agcgaccagg cccacagcag cgtggagagg gccggcctga 2100

tcggcggcgt gaagctgaag gccatcccca gcgacggcaa cttcgccatg agggccagcg 2160

ccctgcagga ggccctggag agggacaagg ccgccggcct gatccccttc ttcatggtgg 2220

ccaccctggg caccaccacc tgctgcagct tcgacaacct gctggaggtg ggccccatct 2280

gcaacaagga ggacatctgg ctgcacgtgg acgccgccta cgccggcagc gccttcatct 2340

gccccgagtt caggcacctg ctgaacggcg tggagttcgc cgacagcttc aacttcaacc 2400

cccacaagtg gctgctggtg aacttcgact gcagcgccat gtgggtgaag aagaggaccg 2460

acctgaccgg cgccttcagg ctggacccca cctacctgaa gcacagccac caggacagcg 2520

gcctgatcac cgactacagg cactggcaga tccccctggg caggaggttc aggagcctga 2580

agatgtggtt cgtgttcagg atgtacggcg tgaagggcct gcaggcctac atcaggaagc 2640

acgtgcagct gagccacgag ttcgagagcc tggtgaggca ggaccccagg ttcgagatct 2700

gcgtggaggt gatcctgggc ctggtgtgct tcaggctgaa gggcagcaac aaggtgaacg 2760

aggccctgct gcagaggatc aacagcgcca agaagatcca cctggtgccc tgccacctga 2820

gggacaagtt cgtgctgagg ttcgccatct gcagcaggac cgtggagagc gcccacgtgc 2880

agagggcctg ggagcacatc aaggagctgg ccgccgacgt gctgagggcc gagagggagt 2940

gagctgctcg agagatctac gggtggcatc cctgtgaccc ctccccagtg cctctcctgg 3000

ccctggaagt tgccactcca gtgcccacca gccttgtcct aataaaatta agttgcatca 3060

ttttgtctga ctaggtgtcc ttctataata ttatggggtg gaggggggtg gtatggagca 3120

aggggcaagt tgggaagaca acctgtaggg cctgcggggt ctattgggaa ccaagctgga 3180

gtgcagtggc acaatcttgg ctcactgcaa tctccgcctc ctgggttcaa gcgattctcc 3240

tgcctcagcc tcccgagttg ttgggattcc aggcatgcat gaccaggctc agctaatttt 3300

tgtttttttg gtagagacgg ggtttcacca tattggccag gctggtctcc aactcctaat 3360

ctcaggtgat ctacccacct tggcctccca aattgctggg attacaggcg tgaaccactg 3420

ctcccttccc tgtccttctg attttgtagg taaccacgtg cggaccgagc ggccgcagtt 3480

aattaagctc gcgaaggaac ccctagtgat ggagttggcc actccctctc tgcgcgctcg 3540

ctcgctcact gaggccgggc gaccaaaggt cgcccgacgc ccgggctttg cccgggcggc 3600

ctcagtgagc gagcgagcgc gcagagaggg agtggccaag acgatttaaa tggtaccgag 3660

ctcgaattca ctggccgtcg ttttacaacg tcgtgactgg gaaaaccctg gcgttaccca 3720

acttaatcgc cttgcagcac atccccctttt cgccagctgg cgtaatagcg aagaggcccg 3780

caccgatcgc ccttcccaac agttgcgcag cctgaatggc gaatggcgcc tgatgcggta 3840

ttttctcctt acgcatctgt gcggtatttc acaccgcata tggtgcactc tcagtacaat 3900

ctgctctgat gccgcatagt taagccagcc ccgacacccg ccaacacccg ctgacgcgcc 3960

ctgacgggct tgtctgctcc cggcatccgc ttacagacaa gctgtgaccg tctccgggag 4020

ctgcatgtgt cagaggtttt caccgtcatc accgaaacgc gcgatgcagc tctggcccgt 4080

gtctcaaaat ctctgatgtt acattgcaca agataaaaat atatcatcat gaacaataaa 4140

actgtctgct tacataaaca gtaatacaag gggtgttgaa gatcctttga tcttttctac 4200

ggggtctgac gctcagtgga acgaaaactc acgttaaggg attttggtca tgagattatc 4260

aaaaaggatc ttcacctaga tccttttaaa ttaaaaatga agttttaaat caagcccaat 4320

ctgaataatg ttacaaccaa ttaaccaatt ctgattagaa aaactcatcg agcatcaaat 4380

gaaactgcaa tttattcata tcaggattat caataccata tttttgaaaa agccgtttct 4440

gtaatgaagg agaaaactca ccgaggcagt tccataggat ggcaagatcc tggtatcggt 4500

ctgcgattcc gactcgtcca acatcaatac aacctattaa tttcccctcg tcaaaaataa 4560

ggttatcaag tgagaaatca ccatgagtga cgactgaatc cggtgagaat ggcaaaagtt 4620

tatgcatttc tttccagact tgttcaacag gccagccatt acgctcgtca tcaaaatcac 4680

tcgcatcaac caaaccgtta ttcattcgtg attgcgcctg agcgagacga aatacgcgat 4740

cgctgttaaa aggacaatta caaacaggaa tcgaatgcaa ccggcgcagg aacactgcca 4800

gcgcatcaac aatattttca cctgaatcag gatattcttc taatacctgg aatgctgttt 4860

ttccggggat cgcagtggtg agtaaccatg catcatcagg agtacggata aaatgcttga 4920

tggtcggaag aggcataaat tccgtcagcc agtttagtct gaccatctca tctgtaacat 4980

cattggcaac gctacctttg ccatgtttca gaaacaactc tggcgcatcg ggcttcccat 5040

acaagcgata gattgtcgca cctgattgcc cgacattatc gcgagcccat ttatacccat 5100

ataaatcagc atccatgttg gaatttaatc gcggcctcga cgtttcccgt tgaatatggc 5160

tcataacacc ccttgtatta ctgtttatgt aagcagacag ttttattgtt catgatgata 5220

tatttttatc ttgtgcaatg taacatcaga gattttgaga cacgggccag agctgcatcg 5280

cgcgttttca gaattggtta attggttgta acattattca gattgggctt gatttaaaac 5340

ttcattttta atttaaaagg atctaggtga agatcctttt tgataatctc atgaccaaaa 5400

tcccttaacg tgagttttcg ttccactgag cgtcagaccc cgtagaaaag atcaaaggat 5460

cttctttcca taggctccgc ccccctgacg agcatcacaa aaatcgacgc tcaagtcaga 5520

ggtggcgaaa cccgacagga ctataaagat accaggcgtt tccccctgga agctccctcg 5580

tgcgctctcc tgttccgacc ctgccgctta ccggatacct gtccgccttt ctcccttcgg 5640

gaagcgtggc gctttctcat agctcacgct gtaggtatct cagttcggtg taggtcgttc 5700

gctccaagct gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc gccttatccg 5760

gtaactatcg tcttgagtcc aacccggtaa gacacgactt atcgccactg gcagcagcca 5820

ctggtaacag gattagcaga gcgaggtatg taggcggtgc tacagagttc ttgaagtggt 5880

ggcctaacta cggctacact agaagaacag tatttggtat ctgcgctctg ctgaagccag 5940

ttaccttcgg aaaaagagtt ggtagctctt gatccggcaa acaaaccacc gctggtagcg 6000

gtggtttttt tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caaaacgcca 6060

gcaacgcggc ctttttacgg ttcctggcct tttgctggcc ttttgctcac atgttctttc 6120

ctgcgttatc ccctgattct gtggataacc gtattaccgc ctttgagtga gctgataccg 6180

ctcgccgcag ccgaacgacc gagcgcagcg agtcagtgag cgaggaagcg gaagagcgcc 6240

caatacgcaa accgcctctc 6260

<210> 13
<211> 6442
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 13
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg cagctgcgcg ctcgctcgct cactgaggcc gcccgggcaa 180

agcccgggcg tcgggcgacc tttggtcgcc cggcctcagt gagcgagcga gcgcgcagag 240

agggagtggc caactccatc actaggggtt gagtttaaac ttcgtcgacg atctgcggcc 300

gcacgcgtgg agctagttat taatagtaat caattacggg gtcattagtt catagcccat 360

atatggagtt ccgcgttaca taacttacgg taaatggccc gcctggctga ccgcccaacg 420

```
acccccgccc attgacgtca ataatgacgt atgttcccat agtaacgtca atagggactt      480

tccattgacg tcaatgggtg gagtatttac ggtaaactgc ccacttggca gtacatcaag      540

tgtatcatat gccaagtacg ccccctattg acgtcaatga cggtaaatgg cccgcctggc      600

attatgccca gtacatgacc ttatgggact ttcctacttg gcagtacatc tacgtattag      660

tcatcgctat taccatggtg atgcggtttt ggcagtacat caatgggcgt ggatagcggt      720

ttgactcacg gggatttcca agtctccacc ccattgacgt caatgggagt ttgttttgca      780

ccaaaatcaa cgggactttc caaaatgtcg taacaactcc gccccattga cgcaaatggg      840

cggtaggcgt gtacggtggg aggtctatat aagcagagct cgtttagtga accgtcagat      900

cgcctggaga cgccatccac gctgttttga cctccataga agacaccggg accgatccag      960

cctccgcgga ttcgaatccc ggccgggaac ggtgcattgg aacgcggatt ccccgtgcca     1020

agagtgacgt aagtaccgcc tatagagtct ataggcccac aaaaaatgct ttcttctttt     1080

aatatacttt tttgtttatc ttatttctaa tactttccct aatctctttc tttcagggca     1140

ataatgatac aatgtatcat gcctctttgc accattctaa agaataacag tgataatttc     1200

tgggttaagg caatagcaat atttctgcat ataaatattt ctgcatataa attgtaactg     1260

atgtaagagg tttcatattg ctaatagcag ctacaatcca gctaccattc tgcttttatt     1320

ttatggttgg gataaggctg gattattctg agtccaagct aggccctttt gctaatcatg     1380

ttcatacctc ttatcttcct cccacagctc ctgggcaacg tgctggtctg tgtgctggcc     1440

catcactttg gcaaagaatt gggattcgaa catcgaattc gggcacgagg gaggacagag     1500

agcaagtcac tcccggctgc ctttttcacc tctgacagag cccagacacc atgaacgcaa     1560

gtgaattccg aaggagaggg aaggagatgg tggattacgt ggccaactac atggaaggca     1620

ttgagggacg ccaggtctac cctgacgtgg agcccgggta cctgcggccg ctgatccctg     1680

ccgctgcccc tcaggagcca gacacgtttg aggacatcat caacgacgtt gagaagataa     1740

tcatgcctgg ggtgacgcac tggcacagcc cctacttctt cgcctacttc cccactgcca     1800

gctcgtaccc ggccatgctt gcggacatgc tgtgcggggc cattggctgc atcggcttct     1860

cctgggcggc aagcccagca tgcacagagc tggagactgt gatgatggac tggctcggga     1920
```

agatgctgga actaccaaag gcatttttga atgagaaagc tggagaaggg ggaggagtga 1980

tccagggaag tgccagtgaa gccaccctgg tggccctgct ggccgctcgg accaaagtga 2040

tccatcggct gcaggcagcg tccccagagc tcacacaggc cgctatcatg gagaagctgg 2100

tggcttactc atccgatcag gcacactcct cagtggaaag agctgggtta attggtggag 2160

tgaaattaaa agccatcccc tcagatggca acttcgccat gcgtgcgtct gccctgcagg 2220

aagccctgga gagagacaaa gcggctggcc tgattccttt ctttatggtt gccaccctgg 2280

ggaccacaac atgctgctcc tttgacaatc tcttagaagt cggtcctatc tgcaacaagg 2340

aagacatatg gctgcacgtt gatgcagcct acgcaggcag tgcattcatc tgccctgagt 2400

tccggcacct tctgaatgga gtggagtttg cagattcatt caactttaat ccccacaaat 2460

ggctattggt gaattttgac tgttctgcca tgtgggtgaa aaagagaaca gacttaacgg 2520

gagcctttag actggacccc acttacctga agcacagcca tcaggattca gggcttatca 2580

ctgactaccg gcattggcag ataccactgg gcagaagatt tcgctctttg aaaatgtggt 2640

ttgtatttag gatgtatgga gtcaaaggac tgcaggctta tatccgcaag catgtccagc 2700

tgtcccatga gtttgagtca ctggtgcgcc aggatccccg ctttgaaatc tgtgtggaag 2760

tcattctggg gcttgtctgc tttcggctaa agggttccaa caaagtgaat gaagctcttc 2820

tgcaaagaat aaacagtgcc aaaaaaatcc acttggttcc atgtcacctc agggacaagt 2880

ttgtcctgcg ctttgccatc tgttctcgca cggtggaatc tgcccatgtg cagcgggcct 2940

gggaacacat caaagagctg gcggccgacg tgctgcgagc agagagggag taggagtgaa 3000

gccagctgca ggaatcaaaa attgaagaga gatatatctg aaaactggaa taagaagcaa 3060

ataaatatca tcctgccttc atggaactca gctgtctgtg gcttcccatg tctttctcca 3120

aagttatcca gagggttgtg attttgtctg cttagtatct catcaacaaa gaaatattat 3180

ttgctaatta aaaagttaat cttcatggcc atagctttta ttcattagct gtgatttttg 3240

ttgattaaaa cattatagat tttcatgttc ttgcagtcat cagaagtggt aggaaagcct 3300

cactgatata ttttccaggg caatcaatgt tcacgcaact tgaaattata tctgtggtct 3360

tcaaattgtc ttttgtcatg tggctaaatg cctaataaac aattcaagtg aaatactaaa 3420

aaaaaaaaaa aaaaaaaaag ctgctcgaga gatctacggg tggcatccct gtgacccctc 3480

cccagtgcct ctcctggccc tggaagttgc cactccagtg cccaccagcc ttgtcctaat 3540

aaaattaagt tgcatcattt tgtctgacta ggtgtccttc tataatatta tggggtggag 3600

gggggtggta tggagcaagg ggcaagttgg gaagacaacc tgtagggcct gcggggtcta 3660

ttgggaacca agctggagtg cagtggcaca atcttggctc actgcaatct ccgcctcctg 3720

ggttcaagcg attctcctgc ctcagcctcc cgagttgttg ggattccagg catgcatgac 3780

caggctcagc taatttttgt ttttttggta gagacggggt ttcaccatat tggccaggct 3840

ggtctccaac tcctaatctc aggtgatcta cccaccttgg cctcccaaat tgctgggatt 3900

acaggcgtga accactgctc ccttccctgt ccttctgatt ttgtaggtaa ccacgtgcgg 3960

accgagcggc cgcagttaat taagctcgcg aaacccctag tgatggagtt ggccactccc 4020

tctctgcgcg ctcgctcgct cactgaggcc gggcgaccaa aggtcgcccg acgcccgggc 4080

tttgcccggg cggcctcagt gagcgagcga gcgcgcagct ggacgattta aatggtaccg 4140

agctcgaatt cactggccgt cgttttacaa cgtcgtgact gggaaaaccc tggcgttacc 4200

caacttaatc gccttgcagc acatcccccc ttcgccagct ggcgtaatag cgaagaggcc 4260

cgcaccgatc gcccttccca acagttgcgc agcctgaatg gcgaatggcg cctgatgcgg 4320

tattttctcc ttacgcatct gtgcggtatt tcacaccgca tatggtgcac tctcagtaca 4380

atctgctctg atgccgcata gttaagccag ccccgacacc cgccaacacc cgctgacgcg 4440

ccctgacggg cttgtctgct cccggcatcc gcttacagac aagctgtgac cgtctccggg 4500

agctgcatgt gtcagaggtt ttcaccgtca tcaccgaaac gcgcgatgca gctctggccc 4560

gtgtctcaaa atctctgatg ttacattgca caagataaaa atatatcatc atgaacaata 4620

aaactgtctg cttacataaa cagtaataca aggggtgtta tgagccatat tcaacgggaa 4680

acgtcgaggc cgcgattaaa ttccaacatg gatgctgatt tatatgggta taaatgggct 4740

cgcgataatg tcgggcaatc aggtgcgaca atctatcgct tgtatgggaa gcccgatgcg 4800

ccagagttgt ttctgaaaca tggcaaaggt agcgttgcca atgatgttac agatgagatg 4860

gtcagactaa actggctgac ggaatttatg cctcttccga ccatcaagca ttttatccgt 4920

actcctgatg atgcatggtt actcaccact gcgatccccg gaaaaacagc attccaggta 4980

ttagaagaat atcctgattc aggtgaaaat attgttgatg cgctggcagt gttcctgcgc 5040

cggttgcatt cgattcctgt ttgtaattgt ccttttaaca gcgatcgcgt atttcgtctc 5100

gctcaggcgc aatcacgaat gaataacggt ttggttgatg cgagtgattt tgatgacgag 5160

cgtaatggct ggcctgttga acaagtctgg aaagaaatgc ataaactttt gccattctca 5220

ccggattcag tcgtcactca tggtgatttc tcacttgata accttatttt tgacgagggg 5280

aaattaatag gttgtattga tgttggacga gtcggaatcg cagaccgata ccaggatctt 5340

gccatcctat ggaactgcct cggtgagttt tctccttcat tacagaaacg gctttttcaa 5400

aaatatggta ttgataatcc tgatatgaat aaattgcagt ttcatttgat gctcgatgag 5460

tttttctaat cagaattggt taattggttg taacattatt cagattgggc ttgatttaaa 5520

acttcatttt taatttaaaa ggatctaggt gaagatcctt tttgataatc tcatgaccaa 5580

aatcccttaa cgtgagtttt cgttccactg agcgtcagac cccgtagaaa agatcaaagg 5640

atcttcttga gatccttttt ttctgcgcgt aatctgctgc ttgcaaacaa aaaaaccacc 5700

gctaccagcg gtggtttgtt tgccggatca agagctacca actcttttc cgaaggtaac 5760

tggcttcagc agagcgcaga taccaaatac tgttcttcta gtgtagccgt agttaggcca 5820

ccacttcaag aactctgtag caccgcctac atacctcgct ctgctaatcc tgttaccagt 5880

ggctgctgcc agtggcgata agtcgtgtct taccgggttg gactcaagac gatagttacc 5940

ggataaggcg cagcggtcgg gctgaacggg gggttcgtgc acacagccca gcttggagcg 6000

aacgacctac accgaactga gatacctaca gcgtgagcta tgagaaagcg ccacgcttcc 6060

cgaagggaga aaggcggaca ggtatccggt aagcggcagg gtcggaacag gagagcgcac 6120

gagggagctt ccagggggaa acgcctggta tctttatagt cctgtcgggt ttcgccacct 6180

ctgacttgag cgtcgatttt tgtgatgctc gtcaggggggg cggagcctat ggaaaaacgc 6240

cagcaacgcg gccttttttac ggttcctggc cttttgctgg ccttttgctc acatgttctt 6300

tcctgcgtta tcccctgatt ctgtggataa ccgtattacc gcctttgagt gagctgatac 6360

cgctcgccgc agccgaacga ccgagcgcag cgagtcagtg agcgaggaag cggaagagcg 6420

cccaatacgc aaaccgcctc tc 6442

<210> 14
<211> 9260
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 14
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg ttggccactc cctctctgcg cgctcgctcg ctcactgagg 180

ccgggcgacc aaaggtcgcc cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc 240

gagcgcgcag agagggagtg gccaactcca tcactagggg ttcctgagtt taaacttcgt 300

cgacgatctg cggccgcacg cgtggagcta gttattaata gtaatcaatt acggggtcat 360

tagttcatag cccatatatg gagttccgcg ttacataact tacggtaaat ggcccgcctg 420

gctgaccgcc caacgacccc cgcccattga cgtcaataat gacgtatgtt cccatagtaa 480

cgtcaatagg gactttccat tgacgtcaat gggtggagta tttacggtaa actgcccact 540

tggcagtaca tcaagtgtat catatgccaa gtacgccccc tattgacgtc aatgacggta 600

aatggcccgc ctggcattat gcccagtaca tgaccttatg ggactttcct acttggcagt 660

acatctacgt attagtcatc gctattacca tggtgatgcg gttttggcag tacatcaatg 720

ggcgtggata gcggtttgac tcacggggat ttccaagtct ccaccccatt gacgtcaatg 780

ggagtttgtt ttgcaccaaa atcaacggga ctttccaaaa tgtcgtaaca actccgcccc 840

attgacgcaa atgggcggta ggcgtgtacg gtgggaggtc tatataagca gagctcgttt 900

agtgaaccgt cagatcgcct ggagacgcca tccacgctgt tttgacctcc atagaagaca 960

ccgggaccga tccagcctcc gcggattcga atcccggccg ggaacggtgc attggaacgc 1020

ggattccccg tgccaagagt gacgtaagta ccgcctatag agtctatagg cccacaaaaa 1080

atgctttctt cttttaatat actttttgt ttatcttatt tctaatactt tccctaatct 1140

ctttctttca gggcaataat gatacaatgt atcatgcctc tttgcaccat tctaaagaat 1200

aacagtgata atttctgggt taaggcaata gcaatatttc tgcatataaa tatttctgca 1260

tataaattgt aactgatgta agaggtttca tattgctaat agcagctaca atccagctac 1320

cattctgctt ttattttatg gttgggataa ggctggatta ttctgagtcc aagctaggcc 1380

cttttgctaa tcatgttcat acctcttatc ttcctcccac agctcctggg caacgtgctg 1440

gtctgtgtgc tggcccatca ctttggcaaa gaattgggat tcgaacatcg gccgccacca 1500

tgaacgccag cgagttcagg aggaggggca aggagatggt ggactacgtg gccaactaca 1560

tggagggcat cgagggcagg caggtgtacc ccgacgtgga gcccggctac ctgaggcccc 1620

tgatccccgc cgccgccccc caggagcccg acaccttcga ggacatcatc aacgacgtgg 1680

agaagatcat catgcccggc gtgacccact ggcacagccc ctacttcttc gcctacttcc 1740

ccaccgccag cagctacccc gccatgctgg ccgacatgct gtgcggcgcc atcggctgca 1800

tcggcttcag ctgggccgcc agccccgcct gcaccgagct ggagaccgtg atgatggact 1860

ggctgggcaa gatgctggag ctgcccaagg ccttcctgaa cgagaaggcc ggcgagggcg 1920

gcggcgtgat ccagggcagc gccagcgagg ccaccctggt ggccctgctg gccgccagga 1980

ccaaggtgat ccacaggctg caggccgcca gccccgagct gacccaggcc gccatcatgg 2040

agaagctggt ggcctacagc agcgaccagg cccacagcag cgtggagagg gccggcctga 2100

tcggcggcgt gaagctgaag gccatcccca gcgacggcaa cttcgccatg agggccagcg 2160

ccctgcagga ggccctggag agggacaagg ccgccggcct gatccccttc ttcatggtgg 2220

ccaccctggg caccaccacc tgctgcagct tcgacaacct gctggaggtg ggccccatct 2280

gcaacaagga ggacatctgg ctgcacgtgg acgccgccta cgccggcagc gccttcatct 2340

gccccgagtt caggcacctg ctgaacggcg tggagttcgc cgacagcttc aacttcaacc 2400

cccacaagtg gctgctggtg aacttcgact gcagcgccat gtgggtgaag aagaggaccg 2460

acctgaccgg cgccttcagg ctggacccca cctacctgaa gcacagccac caggacagcg 2520

gcctgatcac cgactacagg cactggcaga tccccctggg caggaggttc aggagcctga 2580

agatgtggtt cgtgttcagg atgtacggcg tgaagggcct gcaggcctac atcaggaagc 2640

acgtgcagct gagccacgag ttcgagagcc tggtgaggca ggaccccagg ttcgagatct 2700

gcgtggaggt gatcctgggc ctggtgtgct tcaggctgaa gggcagcaac aaggtgaacg 2760

aggccctgct gcagaggatc aacagcgcca agaagatcca cctggtgccc tgccacctga 2820

gggacaagtt cgtgctgagg ttcgccatct gcagcaggac cgtggagagc gcccacgtgc 2880

agagggcctg ggagcacatc aaggagctgg ccgccgacgt gctgagggcc gagagggagt 2940

gagctgctcg agagatctac gggtggcatc cctgtgaccc ctccccagtg cctctcctgg 3000

ccctggaagt tgccactcca gtgcccacca gccttgtcct aataaaatta agttgcatca 3060

ttttgtctga ctaggtgtcc ttctataata ttatggggtg gagggggtg gtatggagca 3120

aggggcaagt tgggaagaca acctgtaggg cctgcggggt ctattgggaa ccaagctgga 3180

gtgcagtggc acaatcttgg ctcactgcaa tctccgcctc ctgggttcaa gcgattctcc 3240

tgcctcagcc tcccgagttg ttgggattcc aggcatgcat gaccaggctc agctaatttt 3300

tgtttttttg gtagagacgg ggtttcacca tattggccag gctggtctcc aactcctaat 3360

ctcaggtgat ctacccacct tggcctccca attgctggg attacaggcg tgaaccactg 3420

ctcccttccc tgtccttctg attttgtagg taaccacgtg cggaccgagc ggccgcagtt 3480

aattaagctc gcgaaggaac ccctagtgat ggagttggcc actccctctc tgcgcgctcg 3540

ctcgctcact gaggccgggc gaccaaaggt cgcccgacgc ccgggctttg cccgggcggc 3600

ctcagtgagc gagcgagcgc gcagagaggg agtggccaag acgatttaaa tggtaccgag 3660

ctcgaattca ctggccgtcg ttttacaacg tcgtgactgg gaaaaccctg gcgttaccca 3720

acttaatcgc cttgcagcac atccccctttt cgccagctgg cgtaatagcg aagaggcccg 3780

caccgatcgc ccttcccaac agttgcgcag cctgaatggc gaatggcgcc tgatgcggta 3840

ttttctcctt acgcatctgt gcggtatttc acaccgcata tggtgcactc tcagtacaat 3900

ctgctctgat gccgcatagt taagccagcc ccgacacccg ccaacacccg ctgacgcgcc 3960

ctgacgggct tgtctgctcc cggcatccgc ttacagacaa gctgtgaccg tctcagaacc 4020

caaatgtgac caaccgttta catatatctt ggtttattat ttcaatttct cttttcaaac 4080

atcttcttct gtcgttgtgc aattttccaa atgccaattt ggtcgcttgg ctatttccaa 4140

acgatttcat atattcaagt tggagatata gacagtcccc tgaacacctc gcatcctctg 4200

ctttttatgc ctgctcgtcc tgtgggtata attttaatgg tcaaatcgct gctggggaat 4260

tgtatacgct gctcttgtgt ctcactgcct cccttgtaga aatggaaatt gcttttccat 4320

tatttccatg tgattttgtt ggttttgcca tcgaattggc attgaaaacg cataaaaata 4380

agcatttcgc atttgcaaag atccaaaaga tttatttgca cgctgagcct ggggatacac 4440

gaaatgtatt tgtaagattc ttcagatgag tttggaacgc acggaaatta ccgtcttggg 4500

atttgttgga catcgcattt aagcatgatg tatcatttaa ttttttccaa tttaaaaaca 4560

aataatcagt gctacgatta agactggatc tattatagac ttcttcaaag tttttcagtt 4620

ttctttaaaa ttacctccat aaaactcttt taatattttg aaaatcatct ccaggttaca 4680

tttaatctga ttaagtttag agtcagttag tttcccacag ttttcttctt gaaataaacc 4740

cattaagtaa ccccaactga tcggcgcaaa tgattcagct atgcagaaaa tatgattgat 4800

gatttttccc tcccaccagc ccttaacact tgcttaaccc ttttgtgtgg ccattatagc 4860

cctttcctcg tagtctgctt aaagttcatt aataagtttt gcgtgagcca aaaatggcgc 4920

cgctttggaa tcgtgacagc gtggaaactc tggactttgg ggttgcaaaa cttcggaagc 4980

tgaaagcatt ttgctgtagc catcgcattt tgggggaaga aatccgaatt cgagtccaaa 5040

ccgaattcta atagaagttt tgcagcaaag tgcctcagac aggttaatga ccaaaagcag 5100

ttttgcattc aaatgctgca gcaaccctcg cacgagggtt gtcatgacgg acgaaaatct 5160

aatttacaac atgcaactgc cactttgagg ggtgactttt acccaagacg tggctgtgaa 5220

ggaaattctg cgagaaagag attaattacg ctctgggggc agttaatgaa tgcttgcgcg 5280

gggcgataag gggttaacgt ttggccagct caaattaccg aatgtataac attttgatga 5340

gcatgacaaa aattggaatt ttcaactctt ttttcctgcg aaaagcataa cttttccatt 5400

aacacaatgg cgacgatgag ccggcaaatc gacgatacca aatcggcata acgtgcatga 5460

aaattataca tgattgattt catattaatt tctacgaatg ttatgaatcg gctaaaagat 5520

gagaatggaa atattgcacg attttgattt tgtcatgatg acaaaaaagg gttgtaagat 5580

ttgtacatgc caaaatcata aacttttaac agaaatcaaa cacaaagaag taatataaca 5640

ttaaagtaca caggccttgt cacagagata gaaaaatgta gctattatta aaatatttaa 5700

cattctcttg gtgtctgcaa cttttctatc agtcgctttt ttattccctt tccaacactt 5760

atttaaaatg aaatgcactc gaaattaact aatttaatgg ctcatatcct ttgtgctgct 5820

taaaaaggca ggaaacgttt tttgtgccct acacctcctc cattcaaatg aaaaaggcgg 5880

tggagtcgag gaaaatgtct gccctggagc ttgacaagcc aagatatggc ccatcaaaaa 5940

tgttcgaatg ttctttttaa ataaatgtct cattatatgg ctgccacgcc cacaccgctc 6000

aacgcccaca cacgtgccgc cttccggttt agttgggtgg tacctgaccg tagatttttc 6060

actgcggaca tgtgtccaat cagtggcaac gtgcaacgaa ccgtggcaaa cacagggaaa 6120

gaacctcgaa gacccacagc aaactcatcc tctcgaattt gacactatga taatgcttat 6180

attcaatttt ttgcaacatt ctatttacac taaactgaga aacaggacaa agttgagaat 6240

gggtgctgtg attatttgtc ttgtgccaat atatgccctc ctgcatataa aatacgagat 6300

acaaaaccaa acgaaataag aacgaacaag aaatcagttt aatttcaatg ctgatcaaac 6360

caagttgaca actctgttgt atattagctc taataatgac ttaaggttcg aaatttaagt 6420

aacttccaaa atgggccaga taaatactgc taatatcgaa tgcaattcaa tgaggaaata 6480

gtaatcaatc agccaaccct aatgaaatta ataatgtaat ttaaaacttt attccaccca 6540

ttctaataat gaaaatcatt aaatatatgt agcaatccaa ttttgttaat acatattgta 6600

tatccctgat ttgtcaatac caaagaccag aaaaaacacc atgccaaatt ccttttattc 6660

gttgaaaatc gaaacaactt tgaagtatta acctgctggc taaaaaatat gtgtattact 6720

aaatatacca tgtaatcaaa agttcgaaat aaacgtgaaa tggcagctcc actcgtcagc 6780

cgtgccactt ttcgactaat caaaatgcct tttgaatgcc tgagttgaat caagttggct 6840

taatagttat tatcccacgc aagcaaagtc aatggcagag ggaaatgcgt agaaattagc 6900

acagacttga atggacgcac gagtgtcgaa tggcaggaga gtgggaaatg aacggggagt 6960

tttccaggat aaggatgttt tcgaagtatc gtaatcattt atagcctcca gatacgggag 7020

ctgcatgtgt cagaggtttt caccgtcatc accgaaacgc gcgatgcagc tctggcccgt 7080

gtctcaaaat ctctgatgtt acattgcaca agataaaaat atatcatcat gaacaataaa 7140

actgtctgct tacataaaca gtaatacaag gggtgttgaa gatcctttga tcttttctac 7200

ggggtctgac gctcagtgga acgaaaactc acgttaaggg attttggtca tgagattatc 7260

aaaaaggatc ttcacctaga tccttttaaa ttaaaaatga agttttaaat caagcccaat 7320

ctgaataatg ttacaaccaa ttaaccaatt ctgattagaa aaactcatcg agcatcaaat 7380

gaaactgcaa tttattcata tcaggattat caataccata tttttgaaaa agccgtttct 7440

gtaatgaagg agaaaactca ccgaggcagt tccataggat ggcaagatcc tggtatcggt 7500

ctgcgattcc gactcgtcca acatcaatac aacctattaa tttcccctcg tcaaaaataa 7560

ggttatcaag tgagaaatca ccatgagtga cgactgaatc cggtgagaat ggcaaaagtt 7620

tatgcatttc tttccagact tgttcaacag gccagccatt acgctcgtca tcaaaatcac 7680

tcgcatcaac caaaccgtta ttcattcgtg attgcgcctg agcgagacga aatacgcgat 7740

cgctgttaaa aggacaatta caaacaggaa tcgaatgcaa ccggcgcagg aacactgcca 7800

gcgcatcaac aatattttca cctgaatcag gatattcttc taatacctgg aatgctgttt 7860

ttccggggat cgcagtggtg agtaaccatg catcatcagg agtacggata aaatgcttga 7920

tggtcggaag aggcataaat tccgtcagcc agtttagtct gaccatctca tctgtaacat 7980

cattggcaac gctacctttg ccatgtttca gaaacaactc tggcgcatcg ggcttcccat 8040

acaagcgata gattgtcgca cctgattgcc cgacattatc gcgagcccat ttatacccat 8100

ataaatcagc atccatgttg gaatttaatc gcggcctcga cgtttcccgt tgaatatggc 8160

tcataacacc ccttgtatta ctgtttatgt aagcagacag ttttattgtt catgatgata 8220

tatttttatc ttgtgcaatg taacatcaga gattttgaga cacgggccag agctgcatcg 8280

cgcgttttca gaattggtta attggttgta acattattca gattgggctt gatttaaaac 8340

ttcatttta atttaaaagg atctaggtga agatcctttt tgataatctc atgaccaaaa 8400

tcccttaacg tgagttttcg ttccactgag cgtcagaccc cgtagaaaag atcaaaggat 8460

cttctttcca taggctccgc ccccctgacg agcatcacaa aaatcgacgc tcaagtcaga 8520

ggtggcgaaa cccgacagga ctataaagat accaggcgtt tccccctgga agctccctcg 8580

tgcgctctcc tgttccgacc ctgccgctta ccggatacct gtccgccttt ctcccttcgg 8640

gaagcgtggc gctttctcat agctcacgct gtaggtatct cagttcggtg taggtcgttc 8700

gctccaagct gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc gccttatccg 8760

gtaactatcg tcttgagtcc aacccggtaa gacacgactt atcgccactg gcagcagcca 8820

ctggtaacag gattagcaga gcgaggtatg taggcggtgc tacagagttc ttgaagtggt 8880

ggcctaacta cggctacact agaagaacag tatttggtat ctgcgctctg ctgaagccag 8940

ttaccttcgg aaaaagagtt ggtagctctt gatccggcaa acaaaccacc gctggtagcg 9000

gtggtttttt tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caaaacgcca 9060

gcaacgcggc ctttttacgg ttcctggcct tttgctggcc ttttgctcac atgttctttc 9120

ctgcgttatc ccctgattct gtggataacc gtattaccgc ctttgagtga gctgataccg 9180

ctcgccgcag ccgaacgacc gagcgcagcg agtcagtgag cgaggaagcg gaagagcgcc 9240

caatacgcaa accgcctctc 9260

<210> 15
<211> 9665
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 15
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg ttggccactc cctctctgcg cgctcgctcg ctcactgagg 180

ccgggcgacc aaaggtcgcc cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc 240

gagcgcgcag agagggagtg gccaactcca tcactagggg ttcctgagtt taaacttcgt 300

cgacgatctg cggccgcacg cgtggagcta gttattaata gtaatcaatt acggggtcat 360

tagttcatag cccatatatg gagttccgcg ttacataact tacggtaaat ggcccgcctg 420

gctgaccgcc caacgacccc cgcccattga cgtcaataat gacgtatgtt cccatagtaa 480

cgtcaatagg gactttccat tgacgtcaat gggtggagta tttacggtaa actgcccact 540

tggcagtaca tcaagtgtat catatgccaa gtacgccccc tattgacgtc aatgacggta 600

aatggcccgc ctggcattat gcccagtaca tgaccttatg ggactttcct acttggcagt 660

acatctacgt attagtcatc gctattacca tggtgatgcg gttttggcag tacatcaatg 720

ggcgtggata gcggtttgac tcacggggat ttccaagtct ccaccccatt gacgtcaatg 780

ggagtttgtt ttgcaccaaa atcaacggga ctttccaaaa tgtcgtaaca actccgcccc 840

attgacgcaa atgggcggta ggcgtgtacg gtgggaggtc tatataagca gagctcgttt 900

agtgaaccgt cagatcgcct ggagacgcca tccacgctgt tttgacctcc atagaagaca 960

ccgggaccga tccagcctcc gcggattcga atcccggccg ggaacggtgc attggaacgc 1020

ggattccccg tgccaagagt gacgtaagta ccgcctatag agtctatagg cccacaaaaa 1080

atgctttctt cttttaatat actttttgt ttatcttatt tctaatactt tccctaatct 1140

ctttctttca gggcaataat gatacaatgt atcatgcctc tttgcaccat tctaaagaat 1200

aacagtgata atttctgggt taaggcaata gcaatatttc tgcatataaa tatttctgca 1260

tataaattgt aactgatgta agaggtttca tattgctaat agcagctaca atccagctac 1320

cattctgctt ttattttatg gttgggataa ggctggatta ttctgagtcc aagctaggcc 1380

cttttgctaa tcatgttcat acctcttatc ttcctcccac agctcctggg caacgtgctg 1440

gtctgtgtgc tggcccatca ctttggcaaa gaattgggat tcgaacatcg gccgccacca 1500

tgaacgcaag tgaattccga aggagaggga aggagatggt ggattacgtg gccaactaca 1560

tggaaggcat tgagggacgc caggtctacc ctgacgtgga gcccgggtac ctgcggccgc 1620

tgatccctgc cgctgcccct caggagccag acacgtttga ggacatcatc aacgacgttg 1680

agaagataat catgcctggg gtgacgcact ggcacagccc ctacttcttc gcctacttcc 1740

ccactgccag ctcgtacccg gccatgcttg cggacatgct gtgcggggcc attggctgca 1800

tcggcttctc ctgggcggca agcccagcat gcacagagct ggagactgtg atgatggact 1860

ggctcgggaa gatgctggaa ctaccaaagg catttttgaa tgagaaagct ggagaagggg 1920

gaggagtgat ccagggaagt gccagtgaag ccaccctggt ggccctgctg gccgctcgga 1980

ccaaagtgat ccatcggctg caggcagcgt ccccagagct cacacaggcc gctatcatgg 2040

agaagctggt ggcttactca tccgatcagg cacactcctc agtggaaaga gctgggttaa 2100

ttggtggagt gaaattaaaa gccatcccct cagatggcaa cttcgccatg cgtgcgtctg 2160

ccctgcagga agccctggag agagacaaag cggctggcct gattcctttc tttatggttg 2220

ccaccctggg gaccacaaca tgctgctcct ttgacaatct cttagaagtc ggtcctatct 2280

gcaacaagga agacatatgg ctgcacgttg atgcagccta cgcaggcagt gcattcatct 2340

gccctgagtt ccggcacctt ctgaatggag tggagtttgc agattcattc aactttaatc 2400

cccacaaatg gctattggtg aattttgact gttctgccat gtgggtgaaa aagagaacag 2460

acttaacggg agcctttaga ctggacccca cttacctgaa gcacagccat caggattcag 2520

ggcttatcac tgactaccgg cattggcaga taccactggg cagaagattt cgctctttga 2580

aaatgtggtt tgtatttagg atgtatggag tcaaaggact gcaggcttat atccgcaagc 2640

atgtccagct gtcccatgag tttgagtcac tggtgcgcca ggatccccgc tttgaaatct 2700

gtgtggaagt cattctgggg cttgtctgct ttcggctaaa gggttccaac aaagtgaatg 2760

aagctcttct gcaaagaata aacagtgcca aaaaaatcca cttggttcca tgtcacctca 2820

gggacaagtt tgtcctgcgc tttgccatct gttctcgcac ggtggaatct gcccatgtgc 2880

agcgggcctg ggaacacatc aaagagctgg cggccgacgt gctgcgagca gagagggagt 2940

aggagtgaag ccagctgcag gaatcaaaaa ttgaagagag atatatctga aaactggaat 3000

aagaagcaaa taaatatcat cctgccttca tggaactcag ctgtctgtgg cttcccatgt 3060

ctttctccaa agttatccag agggttgtga ttttgtctgc ttagtatctc atcaacaaag 3120

aaatattatt tgctaattaa aaagttaatc ttcatggcca tagcttttat tcattagctg 3180

tgatttttgt tgattaaaac attatagatt ttcatgttct tgcagtcatc agaagtggta 3240

ggaaagcctc actgatatat tttccagggc aatcaatgtt cacgcaactt gaaattatat 3300

ctgtggtctt caaattgtct tttgtcatgt ggctaaatgc ctaataagct gctcgagaga 3360

tctacgggtg gcatccctgt gacccctccc cagtgcctct cctggccctg gaagttgcca 3420

ctccagtgcc caccagcctt gtcctaataa aattaagttg catcattttg tctgactagg 3480

tgtccttcta taatattatg gggtggaggg gggtggtatg gagcaagggg caagttggga 3540

agacaacctg tagggcctgc ggggtctatt gggaaccaag ctggagtgca gtggcacaat 3600

cttggctcac tgcaatctcc gcctcctggg ttcaagcgat tctcctgcct cagcctcccg 3660

agttgttggg attccaggca tgcatgacca ggctcagcta atttttgttt ttttggtaga 3720

gacggggttt caccatattg gccaggctgg tctccaactc ctaatctcag gtgatctacc 3780

caccttggcc tcccaaattg ctgggattac aggcgtgaac cactgctccc ttccctgtcc 3840

ttctgatttt gtaggtaacc acgtgcggac cgagcggccg cagttaatta agctcgcgaa 3900

ggaaccccta gtgatggagt tggccactcc ctctctgcgc gctcgctcgc tcactgaggc 3960

cgggcgacca aaggtcgccc gacgcccggg ctttgcccgg gcggcctcag tgagcgagcg 4020

agcgcgcaga gagggagtgg ccaagacgat ttaaatggta ccgagctcga attcactggc 4080

cgtcgtttta caacgtcgtg actgggaaaa ccctggcgtt acccaactta atcgccttgc 4140

agcacatccc cctttcgcca gctggcgtaa tagcgaagag gcccgcaccg atcgcccttc 4200

ccaacagttg cgcagcctga atggcgaatg gcgcctgatg cggtattttc tccttacgca 4260

tctgtgcggt atttcacacc gcatatggtg cactctcagt acaatctgct ctgatgccgc 4320

atagttaagc cagccccgac acccgccaac acccgctgac gcgccctgac gggcttgtct 4380

gctcccggca tccgcttaca gacaagctgt gaccgtctca gaacccaaat gtgaccaacc 4440

gtttacatat atcttggttt attatttcaa tttctctttt caaacatctt cttctgtcgt 4500

tgtgcaattt tccaaatgcc aatttggtcg cttggctatt tccaaacgat ttcatatatt 4560

caagttggag atatagacag tcccctgaac acctcgcatc ctctgctttt tatgcctgct 4620

cgtcctgtgg gtataatttt aatggtcaaa tcgctgctgg ggaattgtat acgctgctct 4680

tgtgtctcac tgcctccctt gtagaaatgg aaattgcttt tccattattt ccatgtgatt 4740

ttgttggttt tgccatcgaa ttggcattga aaacgcataa aaataagcat ttcgcatttg 4800

caaagatcca aaagatttat ttgcacgctg agcctgggga tacacgaaat gtatttgtaa 4860

gattcttcag atgagtttgg aacgcacgga aattaccgtc ttgggatttg ttggacatcg 4920

catttaagca tgatgtatca tttaattttt tccaatttaa aaacaaataa tcagtgctac 4980

gattaagact ggatctatta tagacttctt caaagttttt cagttttctt taaaattacc 5040

tccataaaac tcttttaata ttttgaaaat catctccagg ttacatttaa tctgattaag 5100

tttagagtca gttagtttcc cacagttttc ttcttgaaat aaacccatta agtaacccca 5160

actgatcggc gcaaatgatt cagctatgca gaaaatatga ttgatgattt ttccctccca 5220

ccagccctta acacttgctt aacccttttg tgtggccatt atagcccttt cctcgtagtc 5280

tgcttaaagt tcattaataa gttttgcgtg agccaaaaat ggcgccgctt tggaatcgtg 5340

acagcgtgga aactctggac tttggggttg caaaacttcg gaagctgaaa gcattttgct 5400

gtagccatcg cattttgggg gaagaaatcc gaattcgagt ccaaaccgaa ttctaataga 5460

agttttgcag caaagtgcct cagacaggtt aatgaccaaa agcagttttg cattcaaatg 5520

ctgcagcaac cctcgcacga gggttgtcat gacggacgaa aatctaattt acaacatgca 5580

actgccactt tgaggggtga cttttaccca agacgtggct gtgaaggaaa ttctgcgaga 5640

aagagattaa ttacgctctg ggggcagtta atgaatgctt gcgcggggcg ataaggggtt 5700

aacgtttggc cagctcaaat taccgaatgt ataacatttt gatgagcatg acaaaaattg 5760

gaattttcaa ctctttttc ctgcgaaaag cataactttt ccattaacac aatggcgacg 5820

atgagccggc aaatcgacga taccaaatcg gcataacgtg catgaaaatt atacatgatt 5880

gatttcatat taatttctac gaatgttatg aatcggctaa aagatgagaa tggaaatatt 5940

gcacgatttt gattttgtca tgatgacaaa aaagggttgt aagatttgta catgccaaaa 6000

tcataaactt ttaacagaaa tcaaacacaa agaagtaata taacattaaa gtacacaggc 6060

cttgtcacag agatagaaaa atgtagctat tattaaaata tttaacattc tcttggtgtc 6120

tgcaactttt ctatcagtcg ctttttttatt ccctttccaa cacttattta aaatgaaatg 6180

cactcgaaat taactaattt aatggctcat atcctttgtg ctgcttaaaa aggcaggaaa 6240

cgtttttttgt gccctacacc tcctccattc aaatgaaaaa ggcggtggag tcgaggaaaa 6300

tgtctgccct ggagcttgac aagccaagat atggcccatc aaaaatgttc gaatgttctt 6360

tttaaataaa tgtctcatta tatggctgcc acgcccacac cgctcaacgc ccacacacgt 6420

gccgccttcc ggtttagttg ggtggtacct gaccgtagat ttttcactgc ggacatgtgt 6480

ccaatcagtg gcaacgtgca acgaaccgtg gcaaacacag ggaaagaacc tcgaagaccc 6540

acagcaaact catcctctcg aatttgacac tatgataatg cttatattca atttttgca 6600

acattctatt tacactaaac tgagaaacag gacaaagttg agaatgggtg ctgtgattat 6660

ttgtcttgtg ccaatatatg ccctcctgca tataaaatac gagatacaaa accaaacgaa 6720

ataagaacga acaagaaatc agtttaattt caatgctgat caaaccaagt tgacaactct 6780

gttgtatatt agctctaata atgacttaag gttcgaaatt taagtaactt ccaaaatggg 6840

ccagataaat actgctaata tcgaatgcaa ttcaatgagg aaatagtaat caatcagcca 6900

accctaatga aattaataat gtaatttaaa actttattcc acccattcta ataatgaaaa 6960

tcattaaata tatgtagcaa tccaattttg ttaatacata ttgtatatcc ctgatttgtc 7020

aataccaaag accagaaaaa acaccatgcc aaattccttt tattcgttga aaatcgaaac 7080

aactttgaag tattaacctg ctggctaaaa aatatgtgta ttactaaata taccatgtaa 7140

tcaaaagttc gaaataaacg tgaaatggca gctccactcg tcagccgtgc cacttttcga 7200

ctaatcaaaa tgccttttga atgcctgagt tgaatcaagt tggcttaata gttattatcc 7260

cacgcaagca aagtcaatgg cagagggaaa tgcgtagaaa ttagcacaga cttgaatgga 7320

cgcacgagtg tcgaatggca ggagagtggg aaatgaacgg ggagttttcc aggataagga 7380

tgttttcgaa gtatcgtaat catttatagc ctccagatac gggagctgca tgtgtcagag 7440

gttttcaccg tcatcaccga aacgcgcgat gcagctctgg cccgtgtctc aaaatctctg 7500

atgttacatt gcacaagata aaaatatatc atcatgaaca ataaaactgt ctgcttacat 7560

aaacagtaat acaaggggtg ttgaagatcc tttgatcttt tctacggggt ctgacgctca 7620

gtggaacgaa aactcacgtt aagggatttt ggtcatgaga ttatcaaaaa ggatcttcac 7680

ctagatcctt ttaaattaaa aatgaagttt taaatcaagc ccaatctgaa taatgttaca 7740

accaattaac caattctgat tagaaaaact catcgagcat caaatgaaac tgcaatttat 7800

tcatatcagg attatcaata ccatattttt gaaaaagccg tttctgtaat gaaggagaaa 7860

actcaccgag gcagttccat aggatggcaa gatcctggta tcggtctgcg attccgactc 7920

gtccaacatc aatacaacct attaatttcc cctcgtcaaa aataaggtta tcaagtgaga 7980

aatcaccatg agtgacgact gaatccggtg agaatggcaa aagtttatgc atttctttcc 8040

agacttgttc aacaggccag ccattacgct cgtcatcaaa atcactcgca tcaaccaaac 8100

cgttattcat tcgtgattgc gcctgagcga gacgaaatac gcgatcgctg ttaaaaggac 8160

aattacaaac aggaatcgaa tgcaaccggc gcaggaacac tgccagcgca tcaacaatat 8220

tttcacctga atcaggatat tcttctaata cctggaatgc tgtttttccg gggatcgcag 8280

tggtgagtaa ccatgcatca tcaggagtac ggataaaatg cttgatggtc ggaagaggca 8340

taaattccgt cagccagttt agtctgacca tctcatctgt aacatcattg gcaacgctac 8400

ctttgccatg tttcagaaac aactctggcg catcgggctt cccatacaag cgatagattg 8460

tcgcacctga ttgcccgaca ttatcgcgag cccatttata cccatataaa tcagcatcca 8520

tgttggaatt taatcgcggc ctcgacgttt cccgttgaat atggctcata acacccttg 8580

tattactgtt tatgtaagca gacagtttta ttgttcatga tgatatattt ttatcttgtg 8640

caatgtaaca tcagagattt tgagacacgg gccagagctg catcgcgcgt tttcagaatt 8700

ggttaattgg ttgtaacatt attcagattg ggcttgattt aaaacttcat ttttaattta 8760

aaaggatcta ggtgaagatc ctttttgata atctcatgac caaaatccct taacgtgagt 8820

tttcgttcca ctgagcgtca gaccccgtag aaaagatcaa aggatcttct ttccataggc 8880

tccgcccccc tgacgagcat cacaaaaatc gacgctcaag tcagaggtgg cgaaacccga 8940

caggactata aagataccag gcgtttcccc ctggaagctc cctcgtgcgc tctcctgttc 9000

cgaccctgcc gcttaccgga tacctgtccg cctttctccc ttcgggaagc gtggcgcttt 9060

ctcatagctc acgctgtagg tatctcagtt cggtgtaggt cgttcgctcc aagctgggct 9120

gtgtgcacga acccccccgtt cagcccgacc gctgcgcctt atccggtaac tatcgtcttg 9180

agtccaaccc ggtaagacac gacttatcgc cactggcagc agccactggt aacaggatta 9240

gcagagcgag gtatgtaggc ggtgctacag agttcttgaa gtggtggcct aactacggct 9300

acactagaag aacagtattt ggtatctgcg ctctgctgaa gccagttacc ttcggaaaaa 9360

gagttggtag ctcttgatcc ggcaaacaaa ccaccgctgg tagcggtggt ttttttgttt 9420

gcaagcagca gattacgcgc agaaaaaaag gatctcaaaa cgccagcaac gcggcctttt 9480

tacggttcct ggccttttgc tggccttttg ctcacatgtt ctttcctgcg ttatcccctg 9540

attctgtgga taaccgtatt accgcctttg agtgagctga taccgctcgc cgcagccgaa 9600

cgaccgagcg cagcgagtca gtgagcgagg aagcggaaga gcgcccaata cgcaaaccgc 9660

ctctc 9665

<210> 16
<211> 6236
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 16
cccgcgcgtt ggccgattca ttaatgcagc tggcacgaca ggtttcccga ctggaaagcg 60

ggcagtgagc gcaacgcaat tttcacacag gaaacagcta tgaccatgat tacgccaagc 120

ttgcatgcat ttaaatgacg cagctgcgcg ctcgctcgct cactgaggcc gcccgggcaa 180

agcccgggcg tcgggcgacc tttggtcgcc cggcctcagt gagcgagcga gcgcgcagag 240

agggagtggc caactccatc actaggggtt gagtttaaac ttcgtcgacg atctgcggcc 300

gcacgcgtgg agctagttat taatagtaat caattacggg gtcattagtt catagcccat 360

atatggagtt ccgcgttaca taacttacgg taaatggccc gcctggctga ccgcccaacg 420

acccccgccc attgacgtca ataatgacgt atgttcccat agtaacgtca atagggactt 480

tccattgacg tcaatgggtg gagtatttac ggtaaactgc ccacttggca gtacatcaag 540

tgtatcatat gccaagtacg ccccctattg acgtcaatga cggtaaatgg cccgcctggc 600

attatgccca gtacatgacc ttatgggact ttcctacttg gcagtacatc tacgtattag 660

tcatcgctat taccatggtg atgcggtttt ggcagtacat caatgggcgt ggatagcggt 720

ttgactcacg gggatttcca agtctccacc ccattgacgt caatgggagt ttgttttgca 780

ccaaaatcaa cgggactttc caaaatgtcg taacaactcc gccccattga cgcaaatggg 840

cggtaggcgt gtacggtggg aggtctatat aagcagagct cgtttagtga accgtcagat 900

cgcctggaga cgccatccac gctgttttga cctccataga agacaccggg accgatccag 960

cctccgcgga ttcgaatccc ggccgggaac ggtgcattgg aacgcggatt ccccgtgcca 1020

agagtgacgt aagtaccgcc tatagagtct ataggcccac aaaaaatgct ttcttctttt 1080

aatatacttt tttgtttatc ttatttctaa tactttccct aatctctttc tttcagggca 1140

ataatgatac aatgtatcat gcctctttgc accattctaa agaataacag tgataatttc 1200

tgggttaagg caatagcaat atttctgcat ataaatattt ctgcatataa attgtaactg 1260

atgtaagagg tttcatattg ctaatagcag ctacaatcca gctaccattc tgcttttatt 1320

ttatggttgg gataaggctg gattattctg agtccaagct aggccctttt gctaatcatg 1380

ttcatacctc ttatcttcct cccacagctc ctgggcaacg tgctggtctg tgtgctggcc 1440

catcactttg gcaaagaatt gggattcgaa catcggccgc caccatgaac gcaagtgaat 1500

tccgaaggag agggaaggag atggtggatt acgtggccaa ctacatggaa ggcattgagg 1560

gacgccaggt ctaccctgac gtggagcccg ggtacctgcg gccgctgatc cctgccgctg 1620

cccctcagga gccagacacg tttgaggaca tcatcaacga cgttgagaag ataatcatgc 1680

ctggggtgac gcactggcac agcccctact tcttcgccta cttccccact gccagctcgt 1740

acccggccat gcttgcggac atgctgtgcg gggccattgg ctgcatcggc ttctcctggg 1800

cggcaagccc agcatgcaca gagctggaga ctgtgatgat ggactggctc gggaagatgc 1860

tggaactacc aaaggcattt ttgaatgaga aagctggaga agggggagga gtgatccagg 1920

gaagtgccag tgaagccacc ctggtggccc tgctggccgc tcggaccaaa gtgatccatc 1980

ggctgcaggc agcgtcccca gagctcacac aggccgctat catggagaag ctggtggctt 2040

actcatccga tcaggcacac tcctcagtgg aaagagctgg gttaattggt ggagtgaaat 2100

taaaagccat cccctcagat ggcaacttcg ccatgcgtgc gtctgccctg caggaagccc 2160

tggagagaga caaagcggct ggcctgattc ctttctttat ggttgccacc ctggggacca 2220

caacatgctg ctcctttgac aatctcttag aagtcggtcc tatctgcaac aaggaagaca 2280

tatggctgca cgttgatgca gcctacgcag gcagtgcatt catctgccct gagttccggc 2340

accttctgaa tggagtggag tttgcagatt cattcaactt taatccccac aaatggctat 2400

tggtgaattt tgactgttct gccatgtggg tgaaaaagag aacagactta acgggagcct 2460

ttagactgga ccccacttac ctgaagcaca gccatcagga ttcagggctt atcactgact 2520

accggcattg gcagatacca ctgggcagaa gatttcgctc tttgaaaatg tggtttgtat 2580

ttaggatgta tggagtcaaa ggactgcagg cttatatccg caagcatgtc cagctgtccc 2640

atgagtttga gtcactggtg cgccaggatc cccgctttga aatctgtgtg gaagtcattc 2700

tggggcttgt ctgctttcgg ctaaagggtt ccaacaaagt gaatgaagct cttctgcaaa 2760

gaataaacag tgccaaaaaa atccacttgg ttccatgtca cctcagggac aagtttgtcc 2820

tgcgctttgc catctgttct cgcacggtgg aatctgccca tgtgcagcgg gcctgggaac 2880

acatcaaaga gctggcggcc gacgtgctgc gagcagagag ggagtaggag tgagctgctc 2940

gagagatcta cgggtggcat ccctgtgacc cctccccagt gcctctcctg gccctggaag 3000

ttgccactcc agtgcccacc agccttgtcc taataaaatt aagttgcatc attttgtctg 3060

actaggtgtc cttctataat attatggggt ggaggggggt ggtatggagc aaggggcaag 3120

ttgggaagac aacctgtagg gcctgcgggg tctattggga accaagctgg agtgcagtgg 3180

cacaatcttg gctcactgca atctccgcct cctgggttca agcgattctc ctgcctcagc 3240

ctcccgagtt gttgggattc caggcatgca tgaccaggct cagctaattt ttgtttttt 3300

ggtagagacg gggtttcacc atattggcca ggctggtctc caactcctaa tctcaggtga 3360

tctacccacc ttggcctccc aaattgctgg gattacaggc gtgaaccact gctcccttcc 3420

ctgtccttct gattttgtag gtaaccacgt gcggaccgag cggccgcagt taattaagct 3480

cgcgaaaccc ctagtgatgg agttggccac tccctctctg cgcgctcgct cgctcactga 3540

ggccgggcga ccaaaggtcg cccgacgccc gggctttgcc cgggcggcct cagtgagcga 3600

gcgagcgcgc agctggacga tttaaatggt accgagctcg aattcactgg ccgtcgtttt 3660

acaacgtcgt gactgggaaa accctggcgt tacccaactt aatcgccttg cagcacatcc 3720

ccctttcgcc agctggcgta atagcgaaga ggcccgcacc gatcgccctt cccaacagtt 3780

gcgcagcctg aatggcgaat ggcgcctgat gcggtatttt ctccttacgc atctgtgcgg 3840

tatttcacac cgcatatggt gcactctcag tacaatctgc tctgatgccg catagttaag 3900

ccagccccga cacccgccaa cacccgctga cgcgccctga cgggcttgtc tgctcccggc 3960

atccgcttac agacaagctg tgaccgtctc cgggagctgc atgtgtcaga ggttttcacc 4020

gtcatcaccg aaacgcgcga tgcagctctg gcccgtgtct caaaatctct gatgttacat 4080

tgcacaagat aaaaatatat catcatgaac aataaaactg tctgcttaca taaacagtaa 4140

tacaaggggt gttgaagatc ctttgatctt ttctacgggg tctgacgctc agtggaacga 4200

aaactcacgt taagggattt tggtcatgag attatcaaaa aggatcttca cctagatcct 4260

tttaaattaa aaatgaagtt ttaaatcaag cccaatctga ataatgttac aaccaattaa 4320

ccaattctga ttagaaaaac tcatcgagca tcaaatgaaa ctgcaattta ttcatatcag 4380

gattatcaat accatatttt tgaaaaagcc gtttctgtaa tgaaggagaa aactcaccga 4440

ggcagttcca taggatggca agatcctggt atcggtctgc gattccgact cgtccaacat 4500

caatacaacc tattaatttc ccctcgtcaa aaataaggtt atcaagtgag aaatcaccat 4560

gagtgacgac tgaatccggt gagaatggca aaagtttatg catttctttc cagacttgtt 4620

caacaggcca gccattacgc tcgtcatcaa aatcactcgc atcaaccaaa ccgttattca 4680

ttcgtgattg cgcctgagcg agacgaaata cgcgatcgct gttaaaagga caattacaaa 4740

caggaatcga atgcaaccgg cgcaggaaca ctgccagcgc atcaacaata ttttcacctg 4800

aatcaggata ttcttctaat acctggaatg ctgtttttcc ggggatcgca gtggtgagta 4860

accatgcatc atcaggagta cggataaaat gcttgatggt cggaagaggc ataaattccg 4920

tcagccagtt tagtctgacc atctcatctg taacatcatt ggcaacgcta cctttgccat 4980

gtttcagaaa caactctggc gcatcgggct tcccatacaa gcgatagatt gtcgcacctg 5040

attgcccgac attatcgcga gcccatttat acccatataa atcagcatcc atgttggaat 5100

ttaatcgcgg cctcgacgtt tcccgttgaa tatggctcat aacacccctt gtattactgt 5160

ttatgtaagc agacagtttt attgttcatg atgatatatt tttatcttgt gcaatgtaac 5220

atcagagatt ttgagacacg ggccagagct gcatcgcgcg ttttcagaat tggttaattg 5280

gttgtaacat tattcagatt gggcttgatt taaaacttca tttttaattt aaaaggatct 5340

aggtgaagat cctttttgat aatctcatga ccaaaatccc ttaacgtgag ttttcgttcc 5400

actgagcgtc agaccccgta gaaaagatca aaggatcttc tttccatagg ctccgccccc 5460

ctgacgagca tcacaaaaat cgacgctcaa gtcagaggtg gcgaaacccg acaggactat 5520

aaagatacca ggcgtttccc cctggaagct ccctcgtgcg ctctcctgtt ccgaccctgc 5580

cgcttaccgg atacctgtcc gcctttctcc cttcgggaag cgtggcgctt tctcatagct 5640

cacgctgtag gtatctcagt tcggtgtagg tcgttcgctc caagctgggc tgtgtgcacg 5700

aacccccgt tcagcccgac cgctgcgcct tatccggtaa ctatcgtctt gagtccaacc 5760

cggtaagaca cgacttatcg ccactggcag cagccactgg taacaggatt agcagagcga 5820

ggtatgtagg cggtgctaca gagttcttga agtggtggcc taactacggc tacactagaa 5880

gaacagtatt tggtatctgc gctctgctga agccagttac cttcggaaaa agagttggta 5940

gctcttgatc cggcaaacaa accaccgctg gtagcggtgg ttttttttgtt tgcaagcagc 6000

agattacgcg cagaaaaaaa ggatctcaaa acgccagcaa cgcggccttt ttacggttcc 6060

tggccttttg ctggcctttt gctcacatgt tctttcctgc gttatcccct gattctgtgg 6120

ataaccgtat taccgccttt gagtgagctg ataccgctcg ccgcagccga acgaccgagc 6180

gcagcgagtc agtgagcgag gaagcggaag agcgcccaat acgcaaaccg cctctc 6236

<210> 17
<211> 3497
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 17
cctgcaggca gctgcgcgct cgctcgctca ctgaggccgc ccgggcaaag cccgggcgtc 60

gggcgacctt tggtcgcccg gcctcagtga gcgagcgagc gcgcagagag ggagtggcca 120

actccatcac taggggttcc tgagtttaaa cttcgtcgac gatctgcggc cgcacgcgtg 180

gagctagtta ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt 240

tccgcgttac ataacttacg gtaaatggcc cgcctggctg accgcccaac gacccccgcc 300

cattgacgtc aataatgacg tatgttccca tagtaacgtc aatagggact ttccattgac 360

gtcaatgggt ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata 420

tgccaagtac gccccctatt gacgtcaatg acggtaaatg gcccgcctgg cattatgccc 480

agtacatgac cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta 540

ttaccatggt gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac 600

ggggatttcc aagtctccac cccattgacg tcaatgggag tttgttttgc accaaaatca 660

acgggacttt ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg 720

tgtacggtgg gaggtctata taagcagagc tcgtttagtg aaccgtcaga tcgcctggag 780

acgccatcca cgctgttttg acctccatag aagacaccgg gaccgatcca gcctccgcgg 840

attcgaatcc cggccgggaa cggtgcattg gaacgcggat tccccgtgcc aagagtgacg 900

taagtaccgc ctatagagtc tataggccca caaaaaatgc tttcttcttt taatatactt 960

ttttgtttat cttatttcta atactttccc taatctcttt ctttcagggc aataatgata 1020

caatgtatca tgcctctttg caccattcta aagaataaca gtgataattt ctgggttaag 1080

gcaatagcaa tatttctgca tataaatatt tctgcatata aattgtaact gatgtaagag 1140

gtttcatatt gctaatagca gctacaatcc agctaccatt ctgcttttat tttatggttg 1200

ggataaggct ggattattct gagtccaagc taggcccttt tgctaatcat gttcatacct 1260

cttatcttcc tcccacagct cctgggcaac gtgctggtct gtgtgctggc ccatcacttt 1320

ggcaaagaat tgggattcga acatcggccg ccaccatgaa cgcaagtgaa ttccgaagga 1380

gagggaagga gatggtggat tacgtggcca actacatgga aggcattgag ggacgccagg 1440

tctaccctga cgtggagccc gggtacctgc ggccgctgat ccctgccgct gcccctcagg 1500

agccagacac gtttgaggac atcatcaacg acgttgagaa gataatcatg cctggggtga 1560

cgcactggca cagcccctac ttcttcgcct acttccccac tgccagctcg tacccggcca 1620

tgcttgcgga catgctgtgc ggggccattg gctgcatcgg cttctcctgg gcggcaagcc 1680

cagcatgcac agagctggag actgtgatga tggactggct cgggaagatg ctggaactac 1740

caaaggcatt tttgaatgag aaagctggag aaggggggagg agtgatccag ggaagtgcca 1800

gtgaagccac cctggtggcc ctgctggccg ctcggaccaa agtgatccat cggctgcagg 1860

cagcgtcccc agagctcaca caggccgcta tcatggagaa gctggtggct tactcatccg 1920

atcaggcaca ctcctcagtg gaaagagctg ggttaattgg tggagtgaaa ttaaaagcca 1980

tcccctcaga tggcaacttc gccatgcgtg cgtctgccct gcaggaagcc ctggagagag 2040

acaaagcggc tggcctgatt cctttcttta tggttgccac cctggggacc acaacatgct 2100

gctcctttga caatctctta gaagtcggtc ctatctgcaa caaggaagac atatggctgc 2160

acgttgatgc agcctacgca ggcagtgcat tcatctgccc tgagttccgg caccttctga 2220

atggagtgga gtttgcagat tcattcaact ttaatcccca caaatggcta ttggtgaatt 2280

ttgactgttc tgccatgtgg gtgaaaaaga gaacagactt aacgggagcc tttagactgg 2340

accccactta cctgaagcac agccatcagg attcagggct tatcactgac taccggcatt 2400

ggcagatacc actgggcaga agatttcgct ctttgaaaat gtggtttgta tttaggatgt 2460

atggagtcaa aggactgcag gcttatatcc gcaagcatgt ccagctgtcc catgagtttg 2520

agtcactggt gcgccaggat ccccgctttg aaatctgtgt ggaagtcatt ctggggcttg 2580

tctgctttcg gctaaagggt tccaacaaag tgaatgaagc tcttctgcaa agaataaaca 2640

gtgccaaaaa aatccacttg gttccatgtc acctcaggga caagtttgtc ctgcgctttg 2700

ccatctgttc tcgcacggtg gaatctgccc atgtgcagcg ggcctgggaa cacatcaaag 2760

agctggcggc cgacgtgctg cgagcagaga gggagtagga gtgagctgct cgagagatct 2820

acgggtggca tccctgtgac ccctccccag tgcctctcct ggccctggaa gttgccactc 2880

cagtgcccac cagccttgtc ctaataaaat taagttgcat cattttgtct gactaggtgt 2940

ccttctataa tattatgggg tggaggggGg tggtatggag caaggggcaa gttgggaaga 3000

caacctgtag ggcctgcggg gtctattggg aaccaagctg gagtgcagtg gcacaatctt 3060

ggctcactgc aatctccgcc tcctgggttc aagcgattct cctgcctcag cctcccgagt 3120

tgttgggatt ccaggcatgc atgaccaggc tcagctaatt tttgtttttt tggtagagac 3180

ggggtttcac catattggcc aggctggtct ccaactccta atctcaggtg atctacccac 3240

cttggcctcc caaattgctg ggattacagg cgtgaaccac tgctcccttc cctgtccttc 3300

tgattttgta ggtaaccacg tgcggaccga gcggccgcag ttaattaagc tcgcgaagga 3360

acccctagtg atggagttgg ccactccctc tctgcgcgct cgctcgctca ctgaggccgg 3420

gcgaccaaag gtcgcccgac gcccgggctt tgcccgggcg gcctcagtga gcgagcgagc 3480

gcgcagctgc ctgcagg 3497

<210> 18
<211> 3497
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 18
cctgcaggca gctgcgcgct cgctcgctca ctgaggccgc ccgggcaaag cccgggcgtc 60

gggcgacctt tggtcgcccg gcctcagtga gcgagcgagc gcgcagagag ggagtggcca 120

actccatcac taggggttcc tgagtttaaa cttcgtcgac gatctgcggc cgcacgcgtg 180

gagctagtta ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt 240

tccgcgttac ataacttacg gtaaatggcc cgcctggctg accgcccaac gacccccgcc 300

cattgacgtc aataatgacg tatgttccca tagtaacgtc aatagggact ttccattgac 360

gtcaatgggt ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata 420

tgccaagtac gcccccctatt gacgtcaatg acggtaaatg gcccgcctgg cattatgccc 480

agtacatgac cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta 540

ttaccatggt gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac 600

ggggatttcc aagtctccac cccattgacg tcaatgggag tttgttttgc accaaaatca 660

acgggacttt ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg 720

tgtacggtgg gaggtctata taagcagagc tcgtttagtg aaccgtcaga tcgcctggag 780

acgccatcca cgctgttttg acctccatag aagacaccgg gaccgatcca gcctccgcgg 840

attcgaatcc cggccgggaa cggtgcattg gaacgcggat tccccgtgcc aagagtgacg 900

taagtaccgc ctatagagtc tataggccca caaaaaatgc tttcttcttt taatatactt 960

ttttgtttat cttatttcta atactttccc taatctcttt ctttcagggc aataatgata 1020

caatgtatca tgcctctttg caccattcta aagaataaca gtgataattt ctgggttaag 1080

gcaatagcaa tatttctgca tataaatatt tctgcatata aattgtaact gatgtaagag 1140

gtttcatatt gctaatagca gctacaatcc agctaccatt ctgcttttat tttatggttg 1200

ggataaggct ggattattct gagtccaagc taggcccttt tgctaatcat gttcatacct 1260

cttatcttcc tcccacagct cctgggcaac gtgctggtct gtgtgctggc ccatcacttt 1320

ggcaaagaat tgggattcga acatcggccg ccaccatgaa cgcaagtgaa ttccgaagga 1380

gagggaagga gatggtggat tacgtggcca actacatgga aggcattgag ggacgccagg 1440

tctaccctga cgtggagccc gggtacctgc ggccgctgat ccctgccgct gcccctcagg 1500

agccagacac gtttgaggac atcatcaacg acgttgagaa gataatcatg cctggggtga 1560

cgcactggca cagcccctac ttcttcgcct acttccccac tgccagctcg tacccggcca 1620

tgcttgcgga catgctgtgc ggggccattg gctgcatcgg cttctcctgg gcggcaagcc 1680

cagcatgcac agagctggag actgtgatga tggactggct cgggaagatg ctggaactac 1740

caaaggcatt tttgaatgag aaagctggag aaggggggagg agtgatccag ggaagtgcca 1800

gtgaagccac cctggtggcc ctgctggccg ctcggaccaa agtgatccat cggctgcagg 1860

cagcgtcccc agagctcaca caggccgcta tcatggagaa gctggtggct tactcatccg 1920

atcaggcaca ctcctcagtg gaaagagctg ggttaattgg tggagtgaaa ttaaaagcca 1980

tcccctcaga tggcaacttc gccatgcgtg cgtctgccct gcaggaagcc ctggagagag 2040

acaaagcggc tggcctgatt cctttcttta tggttgccac cctggggacc acaacatgct 2100

gctcctttga caatctctta gaagtcggtc ctatctgcaa caaggaagac atatggctgc 2160

acgttgatgc agcctacgca ggcagtgcat tcatctgccc tgagttccgg caccttctga 2220

atggagtgga gtttgcagat tcattcaact ttaatcccca caaatggcta ttggtgaatt 2280

ttgactgttc tgccatgtgg gtgaaaaaga gaacagactt aacgggagcc tttagactgg 2340

accccactta cctgaagcac agccatcagg attcagggct tatcactgac taccggcatt 2400

ggcagatacc actgggcaga agatttcgct ctttgaaaat gtggtttgta tttaggatgt 2460

atggagtcaa aggactgcag gcttatatcc gcaagcatgt ccagctgtcc catgagtttg 2520

agtcactggt gcgccaggat ccccgctttg aaatctgtgt ggaagtcatt ctggggcttg 2580

tctgctttcg gctaaagggt tccaacaaag tgaatgaagc tcttctgcaa agaataaaca 2640

gtgccaaaaa aatccacttg gttccatgtc acctcaggga caagtttgtc ctgcgctttg 2700

ccatctgttc tcgcacggtg gaatctgccc atgtgcagcg ggcctgggaa cacatcaaag 2760

agctggcggc cgacgtgctg cgagcagaga gggagtagga gtgagctgct cgagagatct 2820

acgggtggca tccctgtgac ccctccccag tgcctctcct ggccctggaa gttgccactc 2880

cagtgcccac cagccttgtc ctaataaaat taagttgcat cattttgtct gactaggtgt 2940

ccttctataa tattatgggg tggaggggg tggtatggag caaggggcaa gttgggaaga 3000

caacctgtag ggcctgcggg gtctattggg aaccaagctg gagtgcagtg gcacaatctt 3060

ggctcactgc aatctccgcc tcctgggttc aagcgattct cctgcctcag cctcccgagt 3120

tgttgggatt ccaggcatgc atgaccaggc tcagctaatt tttgtttttt tggtagagac 3180

ggggtttcac catattggcc aggctggtct ccaactccta atctcaggtg atctacccac 3240

cttggcctcc caaattgctg ggattacagg cgtgaaccac tgctcccttc cctgtccttc 3300

tgattttgta ggtaaccacg tgcggaccga gcggccgcag ttaattaagc tcgcgaagga 3360

acccctagtg atggagttgg ccactccctc tctgcgcgct cgctcgctca ctgaggccgg 3420

gcgaccaaag gtcgcccgac gcccgggctt tgcccgggcg gcctcagtga gcgagcgagc 3480

gcgcagctgc ctgcagg 3497

<210> 19
<211> 3491
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 19
cctgcaggca gctgcgcgct cgctcgctca ctgaggccgc ccgggcaaag cccgggcgtc 60

gggcgacctt tggtcgcccg gcctcagtga gcgagcgagc gcgcagagag ggagtggcca 120

actccatcac taggggttcc tgagtttaaa cttcgtcgac gatctgcggc cgcacgcgtg 180

gagctagtta ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt 240

tccgcgttac ataacttacg gtaaatggcc cgcctggctg accgcccaac gacccccgcc 300

cattgacgtc aataatgacg tatgttccca tagtaacgtc aatagggact ttccattgac 360

gtcaatgggt ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata 420

tgccaagtac gcccccctatt gacgtcaatg acggtaaatg gcccgcctgg cattatgccc 480

agtacatgac cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta 540

ttaccatggt gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac 600

ggggatttcc aagtctccac cccattgacg tcaatgggag tttgttttgc accaaaatca 660

acgggacttt ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg 720

tgtacggtgg gaggtctata taagcagagc tcgtttagtg aaccgtcaga tcgcctggag 780

acgccatcca cgctgttttg acctccatag aagacaccgg gaccgatcca gcctccgcgg 840

attcgaatcc cggccgggaa cggtgcattg gaacgcggat tccccgtgcc aagagtgacg 900

taagtaccgc ctatagagtc tataggccca caaaaaatgc tttcttcttt taatatactt 960

ttttgtttat cttatttcta atactttccc taatctcttt ctttcagggc aataatgata 1020

caatgtatca tgcctctttg caccattcta aagaataaca gtgataattt ctgggttaag 1080

gcaatagcaa tatttctgca tataaatatt tctgcatata aattgtaact gatgtaagag 1140

gtttcatatt gctaatagca gctacaatcc agctaccatt ctgcttttat tttatggttg 1200

ggataaggct ggattattct gagtccaagc taggcccttt tgctaatcat gttcatacct 1260

cttatcttcc tcccacagct cctgggcaac gtgctggtct gtgtgctggc ccatcacttt 1320

ggcaaagaat tgggattcga acatcggccg ccaccatgaa cgccagcgag ttcaggagga 1380

ggggcaagga gatggtggac tacgtggcca actacatgga gggcatcgag ggcaggcagg 1440

tgtaccccga cgtggagccc ggctacctga ggcccctgat ccccgccgcc gccccccagg 1500

agcccgacac cttcgaggac atcatcaacg acgtggagaa gatcatcatg cccggcgtga 1560

cccactggca cagcccctac ttcttcgcct acttccccac cgccagcagc taccccgcca 1620

tgctggccga catgctgtgc ggcgccatcg gctgcatcgg cttcagctgg gccgccagcc 1680

ccgcctgcac cgagctggag accgtgatga tggactggct gggcaagatg ctggagctgc 1740

ccaaggcctt cctgaacgag aaggccggcg agggcggcgg cgtgatccag ggcagcgcca 1800

gcgaggccac cctggtggcc ctgctggccg ccaggaccaa ggtgatccac aggctgcagg 1860

ccgccagccc cgagctgacc caggccgcca tcatggagaa gctggtggcc tacagcagcg 1920

accaggccca cagcagcgtg gagagggccg gcctgatcgg cggcgtgaag ctgaaggcca 1980

tccccagcga cggcaacttc gccatgaggg ccagcgccct gcaggaggcc ctggagaggg 2040

acaaggccgc cggcctgatc cccttcttca tggtggccac cctgggcacc accacctgct 2100

gcagcttcga caacctgctg gaggtgggcc ccatctgcaa caaggaggac atctggctgc 2160

acgtggacgc cgcctacgcc ggcagcgcct tcatctgccc cgagttcagg cacctgctga 2220

acggcgtgga gttcgccgac agcttcaact tcaaccccca caagtggctg ctggtgaact 2280

tcgactgcag cgccatgtgg gtgaagaaga ggaccgacct gaccggcgcc ttcaggctgg 2340

accccaccta cctgaagcac agccaccagg acagcggcct gatcaccgac tacaggcact 2400

ggcagatccc cctgggcagg aggttcagga gcctgaagat gtggttcgtg ttcaggatgt 2460

acggcgtgaa gggcctgcag gcctacatca ggaagcacgt gcagctgagc cacgagttcg 2520

agagcctggt gaggcaggac cccaggttcg agatctgcgt ggaggtgatc ctgggcctgg 2580

tgtgcttcag gctgaagggc agcaacaagg tgaacgaggc cctgctgcag aggatcaaca 2640

gcgccaagaa gatccacctg gtgccctgcc acctgaggga caagttcgtg ctgaggttcg 2700

ccatctgcag caggaccgtg gagagcgccc acgtgcagag ggcctgggag cacatcaagg 2760

agctggccgc cgacgtgctg agggccgaga gggagtgagc tgctcgagag atctacgggt 2820

ggcatccctg tgacccctcc ccagtgcctc tcctggccct ggaagttgcc actccagtgc 2880

ccaccagcct tgtcctaata aaattaagtt gcatcatttt gtctgactag gtgtccttct 2940

ataatattat ggggtggagg ggggtggtat ggagcaaggg gcaagttggg aagacaacct 3000

gtagggcctg cggggtctat tgggaaccaa gctggagtgc agtggcacaa tcttggctca 3060

ctgcaatctc cgcctcctgg gttcaagcga ttctcctgcc tcagcctccc gagttgttgg 3120

gattccaggc atgcatgacc aggctcagct aatttttgtt tttttggtag agacggggtt 3180

tcaccatatt ggccaggctg gtctccaact cctaatctca ggtgatctac ccaccttggc 3240

ctcccaaatt gctgggatta caggcgtgaa ccactgctcc cttccctgtc cttctgattt 3300

tgtaggtaac cacgtgcgga ccgagcggcc gcagttaatt aagctcgcga aggaacccct 3360

agtgatggag ttggccactc cctctctgcg cgctcgctcg ctcactgagg ccgggcgacc 3420

aaaggtcgcc cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc gagcgcgcag 3480

ctgcctgcag g 3491

<210> 20
<211> 4003
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 20
cctgcaggca gctgcgcgct cgctcgctca ctgaggccgc ccgggcaaag cccgggcgtc 60

gggcgacctt tggtcgcccg gcctcagtga gcgagcgagc gcgcagagag ggagtggcca 120

actccatcac taggggttcc tgagtttaaa cttcgtcgac gatctgcggc cgcacgcgtg 180

gagctagtta ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt 240

tccgcgttac ataacttacg gtaaatggcc cgcctggctg accgcccaac gacccccgcc 300

cattgacgtc aataatgacg tatgttccca tagtaacgtc aatagggact ttccattgac 360

gtcaatgggt ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata 420

tgccaagtac gccccctatt gacgtcaatg acggtaaatg gcccgcctgg cattatgccc 480

agtacatgac cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta 540

ttaccatggt gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac 600

ggggatttcc aagtctccac cccattgacg tcaatgggag tttgttttgc accaaaatca 660

acgggacttt ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg 720

tgtacggtgg gaggtctata taagcagagc tcgtttagtg aaccgtcaga tcgcctggag 780

acgccatcca cgctgttttg acctccatag aagacaccgg gaccgatcca gcctccgcgg 840

attcgaatcc cggccgggaa cggtgcattg gaacgcggat tccccgtgcc aagagtgacg 900

taagtaccgc ctatagagtc tataggccca caaaaaatgc tttcttcttt taatatactt 960

ttttgtttat cttatttcta atactttccc taatctcttt ctttcagggc aataatgata 1020

caatgtatca tgcctctttg caccattcta aagaataaca gtgataattt ctgggttaag 1080

gcaatagcaa tatttctgca tataaatatt tctgcatata aattgtaact gatgtaagag 1140

gtttcatatt gctaatagca gctacaatcc agctaccatt ctgcttttat tttatggttg 1200

ggataaggct ggattattct gagtccaagc taggcccttt tgctaatcat gttcatacct 1260

cttatcttcc tcccacagct cctgggcaac gtgctggtct gtgtgctggc ccatcacttt 1320

ggcaaagaat tgggattcga acatcgaatt cgggcacgag ggaggacaga gagcaagtca 1380

ctcccggctg ccttttttcac ctctgacaga gcccagacac catgaacgca agtgaattcc 1440

gaaggagagg gaaggagatg gtggattacg tggccaacta catggaaggc attgagggac 1500

gccaggtcta ccctgacgtg gagcccgggt acctgcggcc gctgatccct gccgctgccc 1560

ctcaggagcc agacacgttt gaggacatca tcaacgacgt tgagaagata atcatgcctg 1620

gggtgacgca ctggcacagc ccctacttct tcgcctactt ccccactgcc agctcgtacc 1680

cggccatgct tgcggacatg ctgtgcgggg ccattggctg catcggcttc tcctgggcgg 1740

caagcccagc atgcacagag ctggagactg tgatgatgga ctggctcggg aagatgctgg 1800

aactaccaaa ggcatttttg aatgagaaag ctggagaagg gggaggagtg atccagggaa 1860

gtgccagtga agccaccctg gtggccctgc tggccgctcg gaccaaagtg atccatcggc 1920

tgcaggcagc gtccccagag ctcacacagg ccgctatcat ggagaagctg gtggcttact 1980

catccgatca ggcacactcc tcagtggaaa gagctgggtt aattggtgga gtgaaattaa 2040

aagccatccc ctcagatggc aacttcgcca tgcgtgcgtc tgccctgcag gaagccctgg 2100

agagagacaa agcggctggc ctgattcctt tctttatggt tgccaccctg gggaccacaa 2160

catgctgctc ctttgacaat ctcttagaag tcggtcctat ctgcaacaag gaagacatat 2220

ggctgcacgt tgatgcagcc tacgcaggca gtgcattcat ctgccctgag ttccggcacc 2280

ttctgaatgg agtggagttt gcagattcat tcaactttaa tccccacaaa tggctattgg 2340

tgaattttga ctgttctgcc atgtgggtga aaaagagaac agacttaacg ggagccttta 2400

gactggaccc cacttacctg aagcacagcc atcaggattc agggcttatc actgactacc 2460

ggcattggca gataccactg ggcagaagat ttcgctcttt gaaaatgtgg tttgtattta 2520

ggatgtatgg agtcaaagga ctgcaggctt atatccgcaa gcatgtccag ctgtcccatg 2580

agtttgagtc actggtgcgc caggatcccc gctttgaaat ctgtgtggaa gtcattctgg 2640

ggcttgtctg ctttcggcta aagggttcca acaaagtgaa tgaagctctt ctgcaaagaa 2700

taaacagtgc caaaaaaatc cacttggttc catgtcacct cagggacaag tttgtcctgc 2760

gctttgccat ctgttctcgc acggtggaat ctgcccatgt gcagcgggcc tgggaacaca 2820

tcaaagagct ggcggccgac gtgctgcgag cagagaggga gtaggagtga agccagctgc 2880

aggaatcaaa aattgaagag agatatatct gaaaactgga ataagaagca aataaatatc 2940

atcctgcctt catggaactc agctgtctgt ggcttcccat gtctttctcc aaagttatcc 3000

agagggttgt gattttgtct gcttagtatc tcatcaacaa agaaatatta tttgctaatt 3060

aaaaagttaa tcttcatggc catagctttt attcattagc tgtgattttt gttgattaaa 3120

acattataga ttttcatgtt cttgcagtca tcagaagtgg taggaaagcc tcactgatat 3180

attttccagg gcaatcaatg ttcacgcaac ttgaaattat atctgtggtc ttcaaattgt 3240

cttttgtcat gtggctaaat gcctaataaa caattcaagt gaaatactaa aaaaaaaaaa 3300

aaaaaaaaaa gctgctcgag agatctacgg gtggcatccc tgtgacccct ccccagtgcc 3360

tctcctggcc ctggaagttg ccactccagt gcccaccagc cttgtcctaa taaaattaag 3420

ttgcatcatt ttgtctgact aggtgtcctt ctataatatt atggggtgga ggggggtggt 3480

atggagcaag gggcaagttg ggaagacaac ctgtagggcc tgcggggtct attgggaacc 3540

aagctggagt gcagtggcac aatcttggct cactgcaatc tccgcctcct gggttcaagc 3600

gattctcctg cctcagcctc ccgagttgtt gggattccag gcatgcatga ccaggctcag 3660

ctaatttttg ttttttggt agagacgggg tttcaccata ttggccaggc tggtctccaa 3720

ctcctaatct caggtgatct acccaccttg gcctcccaaa ttgctgggat tacaggcgtg 3780

aaccactgct cccttccctg tccttctgat tttgtaggta accacgtgcg gaccgagcgg 3840

ccgcagttaa ttaagctcgc gaaggaaccc ctagtgatgg agttggccac tccctctctg 3900

cgcgctcgct cgctcactga ggccgggcga ccaaaggtcg cccgacgccc gggctttgcc 3960

cgggcggcct cagtgagcga gcgagcgcgc agctgcctgc agg 4003

<210> 21
<211> 3499
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 21
ttggccactc cctctctgcg cgctcgctcg ctcactgagg ccgggcgacc aaaggtcgcc 60

cgacgcccgg gctttgcccg ggcggcctca gtgagcgagc gagcgcgcag agagggagtg 120

gccaactcca tcactagggg ttcctgagtt taaacttcgt cgacgatctg cggccgcacg 180

cgtggagcta gttattaata gtaatcaatt acggggtcat tagttcatag cccatatatg 240

gagttccgcg ttacataact tacggtaaat ggcccgcctg gctgaccgcc caacgacccc 300

cgcccattga cgtcaataat gacgtatgtt cccatagtaa cgtcaatagg gactttccat 360

tgacgtcaat gggtggagta tttacggtaa actgcccact tggcagtaca tcaagtgtat 420

catatgccaa gtacgccccc tattgacgtc aatgacggta aatggcccgc ctggcattat 480

gcccagtaca tgaccttatg ggactttcct acttggcagt acatctacgt attagtcatc 540

gctattacca tggtgatgcg gttttggcag tacatcaatg ggcgtggata gcggtttgac 600

tcacggggat ttccaagtct ccaccccatt gacgtcaatg ggagtttgtt ttgcaccaaa 660

atcaacggga ctttccaaaa tgtcgtaaca actccgcccc attgacgcaa atgggcggta 720

ggcgtgtacg gtgggaggtc tatataagca gagctcgttt agtgaaccgt cagatcgcct 780

ggagacgcca tccacgctgt tttgacctcc atagaagaca ccgggaccga tccagcctcc 840

gcggattcga atcccggccg ggaacggtgc attggaacgc ggattccccg tgccaagagt 900

gacgtaagta ccgcctatag agtctatagg cccacaaaaa atgctttctt cttttaatat 960

actttttgt ttatcttatt tctaatactt tccctaatct ctttctttca gggcaataat 1020

gatacaatgt atcatgcctc tttgcaccat tctaaagaat aacagtgata atttctgggt 1080

taaggcaata gcaatatttc tgcatataaa tatttctgca tataaattgt aactgatgta 1140

agaggtttca tattgctaat agcagctaca atccagctac cattctgctt ttattttatg 1200

gttgggataa ggctggatta ttctgagtcc aagctaggcc cttttgctaa tcatgttcat 1260

acctcttatc ttcctcccac agctcctggg caacgtgctg gtctgtgtgc tggcccatca 1320

ctttggcaaa gaattgggat tcgaacatcg gccgccacca tgaacgccag cgagttcagg 1380

aggaggggca aggagatggt ggactacgtg gccaactaca tggagggcat cgagggcagg 1440

caggtgtacc ccgacgtgga gcccggctac ctgaggcccc tgatccccgc cgccgccccc 1500

caggagcccg acaccttcga ggacatcatc aacgacgtgg agaagatcat catgcccggc 1560

gtgacccact ggcacagccc ctacttcttc gcctacttcc ccaccgccag cagctacccc 1620

gccatgctgg ccgacatgct gtgcggcgcc atcggctgca tcggcttcag ctgggccgcc 1680

agccccgcct gcaccgagct ggagaccgtg atgatggact ggctgggcaa gatgctggag 1740

ctgcccaagg ccttcctgaa cgagaaggcc ggcgagggcg gcggcgtgat ccagggcagc 1800

gccagcgagg ccaccctggt ggccctgctg gccgccagga ccaaggtgat ccacaggctg 1860

caggccgcca gccccgagct gacccaggcc gccatcatgg agaagctggt ggcctacagc 1920

agcgaccagg cccacagcag cgtggagagg gccggcctga tcggcggcgt gaagctgaag 1980

gccatcccca gcgacggcaa cttcgccatg agggccagcg ccctgcagga ggccctggag 2040

agggacaagg ccgccggcct gatccccttc ttcatggtgg ccaccctggg caccaccacc 2100

tgctgcagct tcgacaacct gctggaggtg ggccccatct gcaacaagga ggacatctgg 2160

ctgcacgtgg acgccgccta cgccggcagc gccttcatct gccccgagtt caggcacctg 2220

ctgaacggcg tggagttcgc cgacagcttc aacttcaacc cccacaagtg gctgctggtg 2280

aacttcgact gcagcgccat gtgggtgaag aagaggaccg acctgaccgg cgccttcagg 2340

ctggacccca cctacctgaa gcacagccac caggacagcg gcctgatcac cgactacagg 2400

cactggcaga tccccctggg caggaggttc aggagcctga agatgtggtt cgtgttcagg 2460

atgtacggcg tgaagggcct gcaggcctac atcaggaagc acgtgcagct gagccacgag 2520

ttcgagagcc tggtgaggca ggaccccagg ttcgagatct gcgtggaggt gatcctgggc 2580

ctggtgtgct tcaggctgaa gggcagcaac aaggtgaacg aggccctgct gcagaggatc 2640

aacagcgcca agaagatcca cctggtgccc tgccacctga gggacaagtt cgtgctgagg 2700

ttcgccatct gcagcaggac cgtggagagc gcccacgtgc agagggcctg ggagcacatc 2760

aaggagctgg ccgccgacgt gctgagggcc gagagggagt gagctgctcg agagatctac 2820

gggtggcatc cctgtgaccc ctccccagtg cctctcctgg ccctggaagt tgccactcca 2880

gtgcccacca gccttgtcct aataaaatta agttgcatca ttttgtctga ctaggtgtcc 2940

ttctataata ttatggggtg gagggggggtg gtatggagca aggggcaagt tgggaagaca 3000

acctgtaggg cctgcggggt ctattgggaa ccaagctgga gtgcagtggc acaatcttgg 3060

ctcactgcaa tctccgcctc ctgggttcaa gcgattctcc tgcctcagcc tcccgagttg 3120

ttgggattcc aggcatgcat gaccaggctc agctaatttt tgtttttttg gtagagacgg 3180

ggtttcacca tattggccag gctggtctcc aactcctaat ctcaggtgat ctacccacct 3240

tggcctccca aattgctggg attacaggcg tgaaccactg ctcccttccc tgtccttctg 3300

attttgtagg taaccacgtg cggaccgagc ggccgcagtt aattaagctc gcgaaggaac 3360

ccctagtgat ggagttggcc actccctctc tgcgcgctcg ctcgctcact gaggccgggc 3420

gaccaaaggt cgcccgacgc ccgggctttg cccgggcggc ctcagtgagc gagcgagcgc 3480

gcagagaggg agtggccaa 3499

<210> 22
<211> 3896
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 22
cctgcaggca gctgcgcgct cgctcgctca ctgaggccgc ccgggcaaag cccgggcgtc 60

gggcgacctt tggtcgcccg gcctcagtga gcgagcgagc gcgcagagag ggagtggcca 120

actccatcac taggggttcc tgagtttaaa cttcgtcgac gatctgcggc cgcacgcgtg 180

gagctagtta ttaatagtaa tcaattacgg ggtcattagt tcatagccca tatatggagt 240

tccgcgttac ataacttacg gtaaatggcc cgcctggctg accgcccaac gacccccgcc 300

cattgacgtc aataatgacg tatgttccca tagtaacgtc aatagggact ttccattgac 360

gtcaatgggt ggagtattta cggtaaactg cccacttggc agtacatcaa gtgtatcata 420

tgccaagtac gccccctatt gacgtcaatg acggtaaatg gcccgcctgg cattatgccc 480

agtacatgac cttatgggac tttcctactt ggcagtacat ctacgtatta gtcatcgcta 540

ttaccatggt gatgcggttt tggcagtaca tcaatgggcg tggatagcgg tttgactcac 600

ggggatttcc aagtctccac cccattgacg tcaatgggag tttgttttgc accaaaatca 660

acgggacttt ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg 720

tgtacggtgg gaggtctata taagcagagc tcgtttagtg aaccgtcaga tcgcctggag 780

acgccatcca cgctgttttg acctccatag aagacaccgg gaccgatcca gcctccgcgg 840

attcgaatcc cggccgggaa cggtgcattg gaacgcggat tccccgtgcc aagagtgacg 900

taagtaccgc ctatagagtc tataggccca caaaaaatgc tttcttcttt taatatactt 960

ttttgtttat cttatttcta atactttccc taatctcttt ctttcagggc aataatgata 1020

caatgtatca tgcctctttg caccattcta aagaataaca gtgataattt ctgggttaag 1080

gcaatagcaa tatttctgca tataaatatt tctgcatata aattgtaact gatgtaagag 1140

gtttcatatt gctaatagca gctacaatcc agctaccatt ctgcttttat tttatggttg 1200

ggataaggct ggattattct gagtccaagc taggcccttt tgctaatcat gttcatacct 1260

cttatcttcc tcccacagct cctgggcaac gtgctggtct gtgtgctggc ccatcacttt 1320

ggcaaagaat tgggattcga acatcggccg ccaccatgaa cgcaagtgaa ttccgaagga 1380

gagggaagga gatggtggat tacgtggcca actacatgga aggcattgag ggacgccagg 1440

tctaccctga cgtggagccc gggtacctgc ggccgctgat ccctgccgct gcccctcagg 1500

agccagacac gtttgaggac atcatcaacg acgttgagaa gataatcatg cctggggtga 1560

cgcactggca cagcccctac ttcttcgcct acttccccac tgccagctcg tacccggcca 1620

tgcttgcgga catgctgtgc ggggccattg gctgcatcgg cttctcctgg gcggcaagcc 1680

cagcatgcac agagctggag actgtgatga tggactggct cgggaagatg ctggaactac 1740

caaaggcatt tttgaatgag aaagctggag aaggggggagg agtgatccag ggaagtgcca 1800

gtgaagccac cctggtggcc ctgctggccg ctcggaccaa agtgatccat cggctgcagg 1860

cagcgtcccc agagctcaca caggccgcta tcatggagaa gctggtggct tactcatccg 1920

atcaggcaca ctcctcagtg gaaagagctg ggttaattgg tggagtgaaa ttaaaagcca 1980

tcccctcaga tggcaacttc gccatgcgtg cgtctgccct gcaggaagcc ctggagagag 2040

acaaagcggc tggcctgatt cctttcttta tggttgccac cctggggacc acaacatgct 2100

gctcctttga caatctctta gaagtcggtc ctatctgcaa caaggaagac atatggctgc 2160

acgttgatgc agcctacgca ggcagtgcat tcatctgccc tgagttccgg caccttctga 2220

atggagtgga gtttgcagat tcattcaact ttaatcccca caaatggcta ttggtgaatt 2280

ttgactgttc tgccatgtgg gtgaaaaaga gaacagactt aacgggagcc tttagactgg 2340

accccactta cctgaagcac agccatcagg attcagggct tatcactgac taccggcatt 2400

ggcagatacc actgggcaga agatttcgct ctttgaaaat gtggtttgta tttaggatgt 2460

atggagtcaa aggactgcag gcttatatcc gcaagcatgt ccagctgtcc catgagtttg 2520

agtcactggt gcgccaggat ccccgctttg aaatctgtgt ggaagtcatt ctggggcttg 2580

tctgctttcg gctaaagggt tccaacaaag tgaatgaagc tcttctgcaa agaataaaca 2640

gtgccaaaaa aatccacttg gttccatgtc acctcaggga caagtttgtc ctgcgctttg 2700

ccatctgttc tcgcacggtg gaatctgccc atgtgcagcg ggcctgggaa cacatcaaag 2760

agctggcggc cgacgtgctg cgagcagaga gggagtagga gtgaagccag ctgcaggaat 2820

caaaaattga agagagatat atctgaaaac tggaataaga agcaaataaa tatcatcctg 2880

ccttcatgga actcagctgt ctgtggcttc ccatgtcttt ctccaaagtt atccagaggg 2940

ttgtgatttt gtctgcttag tatctcatca acaaagaaat attatttgct aattaaaaag 3000

ttaatcttca tggccatagc ttttattcat tagctgtgat ttttgttgat taaaacatta 3060

tagattttca tgttcttgca gtcatcagaa gtggtaggaa agcctcactg atatattttc 3120

cagggcaatc aatgttcacg caacttgaaa ttatatctgt ggtcttcaaa ttgtcttttg 3180

tcatgtggct aaatgcctaa taagctgctc gagagatcta cgggtggcat ccctgtgacc 3240

cctccccagt gcctctcctg gccctggaag ttgccactcc agtgcccacc agccttgtcc 3300

taataaaatt aagttgcatc attttgtctg actaggtgtc cttctataat attatggggt 3360

ggaggggggt ggtatggagc aaggggcaag ttgggaagac aacctgtagg gcctgcgggg 3420

tctattggga accaagctgg agtgcagtgg cacaatcttg gctcactgca atctccgcct 3480

cctgggttca agcgattctc ctgcctcagc ctcccgagtt gttgggattc caggcatgca 3540

tgaccaggct cagctaattt ttgtttttt ggtagagacg gggtttcacc atattggcca 3600

ggctggtctc caactcctaa tctcaggtga tctacccacc ttggcctccc aaattgctgg 3660

gattacaggc gtgaaccact gctcccttcc ctgtccttct gattttgtag gtaaccacgt 3720

gcggaccgag cggccgcagt taattaagct cgcgaaggaa cccctagtga tggagttggc 3780

cactccctct ctgcgcgctc gctcgctcac tgaggccggg cgaccaaagg tcgcccgacg 3840

cccgggcttt gcccgggcgg cctcagtgag cgagcgagcg cgcagctgcc tgcagg 3896

<210> 23
<211> 3475
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 23
cagctgcgcg ctcgctcgct cactgaggcc gcccgggcaa agcccgggcg tcgggcgacc 60

tttggtcgcc cggcctcagt gagcgagcga gcgcgcagag agggagtggc caactccatc 120

actaggggtt gagtttaaac ttcgtcgacg atctgcggcc gcacgcgtgg agctagttat 180

taatagtaat caattacggg gtcattagtt catagcccat atatggagtt ccgcgttaca 240

taacttacgg taaatggccc gcctggctga ccgcccaacg acccccgccc attgacgtca 300

ataatgacgt atgttcccat agtaacgtca atagggactt tccattgacg tcaatgggtg 360

gagtatttac ggtaaactgc ccacttggca gtacatcaag tgtatcatat gccaagtacg 420

ccccctattg acgtcaatga cggtaaatgg cccgcctggc attatgccca gtacatgacc 480

ttatgggact ttcctacttg gcagtacatc tacgtattag tcatcgctat taccatggtg 540

atgcggtttt ggcagtacat caatgggcgt ggatagcggt ttgactcacg gggatttcca 600

agtctccacc ccattgacgt caatgggagt ttgttttgca ccaaaatcaa cgggactttc 660

caaaatgtcg taacaactcc gccccattga cgcaaatggg cggtaggcgt gtacggtggg 720

aggtctatat aagcagagct cgtttagtga accgtcagat cgcctggaga cgccatccac 780

gctgttttga cctccataga agacaccggg accgatccag cctccgcgga ttcgaatccc 840

ggccgggaac ggtgcattgg aacgcggatt ccccgtgcca agagtgacgt aagtaccgcc 900

tatagagtct ataggcccac aaaaaatgct ttcttctttt aatatacttt tttgtttatc 960

ttatttctaa tactttccct aatctctttc tttcagggca ataatgatac aatgtatcat 1020

gcctctttgc accattctaa agaataacag tgataatttc tgggttaagg caatagcaat 1080

atttctgcat ataaatattt ctgcatataa attgtaactg atgtaagagg tttcatattg 1140

ctaatagcag ctacaatcca gctaccattc tgcttttatt ttatggttgg gataaggctg 1200

gattattctg agtccaagct aggccctttt gctaatcatg ttcatacctc ttatcttcct 1260

cccacagctc ctgggcaacg tgctggtctg tgtgctggcc catcactttg gcaaagaatt 1320

gggattcgaa catcggccgc caccatgaac gcaagtgaat tccgaaggag agggaaggag 1380

atggtggatt acgtggccaa ctacatggaa ggcattgagg gacgccaggt ctaccctgac 1440

gtggagcccg ggtacctgcg gccgctgatc cctgccgctg cccctcagga gccagacacg 1500

tttgaggaca tcatcaacga cgttgagaag ataatcatgc ctggggtgac gcactggcac 1560

agcccctact tcttcgccta cttccccact gccagctcgt acccggccat gcttgcggac 1620

atgctgtgcg gggccattgg ctgcatcggc ttctcctggg cggcaagccc agcatgcaca 1680

gagctggaga ctgtgatgat ggactggctc gggaagatgc tggaactacc aaaggcattt 1740

ttgaatgaga aagctggaga agggggagga gtgatccagg gaagtgccag tgaagccacc 1800

ctggtggccc tgctggccgc tcggaccaaa gtgatccatc ggctgcaggc agcgtcccca 1860

gagctcacac aggccgctat catggagaag ctggtggctt actcatccga tcaggcacac 1920

tcctcagtgg aaagagctgg gttaattggt ggagtgaaat taaaagccat cccctcagat 1980

ggcaacttcg ccatgcgtgc gtctgccctg caggaagccc tggagagaga caaagcggct 2040

ggcctgattc ctttctttat ggttgccacc ctggggacca caacatgctg ctcctttgac 2100

aatctcttag aagtcggtcc tatctgcaac aaggaagaca tatggctgca cgttgatgca 2160

gcctacgcag gcagtgcatt catctgccct gagttccggc accttctgaa tggagtggag 2220

tttgcagatt cattcaactt taatccccac aaatggctat tggtgaattt tgactgttct 2280

gccatgtggg tgaaaaagag aacagactta acgggagcct ttagactgga ccccacttac 2340

ctgaagcaca gccatcagga ttcagggctt atcactgact accggcattg gcagatacca 2400

ctgggcagaa gatttcgctc tttgaaaatg tggtttgtat ttaggatgta tggagtcaaa 2460

ggactgcagg cttatatccg caagcatgtc cagctgtccc atgagtttga gtcactggtg 2520

cgccaggatc cccgctttga aatctgtgtg gaagtcattc tggggcttgt ctgctttcgg 2580

ctaaagggtt ccaacaaagt gaatgaagct cttctgcaaa gaataaacag tgccaaaaaa 2640

atccacttgg ttccatgtca cctcagggac aagtttgtcc tgcgctttgc catctgttct 2700

cgcacggtgg aatctgccca tgtgcagcgg gcctgggaac acatcaaaga gctggcggcc 2760

gacgtgctgc gagcagagag ggagtaggag tgagctgctc gagagatcta cgggtggcat 2820

ccctgtgacc cctccccagt gcctctcctg gccctggaag ttgccactcc agtgcccacc 2880

agccttgtcc taataaaatt aagttgcatc attttgtctg actaggtgtc cttctataat 2940

attatggggt ggaggggggt ggtatggagc aaggggcaag ttgggaagac aacctgtagg 3000

gcctgcgggg tctattggga accaagctgg agtgcagtgg cacaatcttg gctcactgca 3060

atctccgcct cctgggttca agcgattctc ctgcctcagc ctcccgagtt gttgggattc 3120

caggcatgca tgaccaggct cagctaattt ttgtttttt ggtagagacg gggtttcacc 3180

atattggcca ggctggtctc caactcctaa tctcaggtga tctacccacc ttggcctccc 3240

aaattgctgg gattacaggc gtgaaccact gctcccttcc ctgtccttct gattttgtag 3300

gtaaccacgt gcggaccgag cggccgcagt taattaagct cgcgaaaccc ctagtgatgg 3360

agttggccac tccctctctg cgcgctcgct cgctcactga ggccgggcga ccaaaggtcg 3420

cccgacgccc gggctttgcc cgggcggcct cagtgagcga gcgagcgcgc agctg 3475