SEQUENCE LISTING

<110> ALNYLAM PHARMACEUTICALS, INC.

<120> HUNTINGTIN (HTT) IRNA AGENT COMPOSITIONS AND METHODS OF USE THEREOF

<130> 121301-14420

<140>
<141>

<150> 63/167,140
<151> 2021-03-29

<160> 101

<170> PatentIn version 3.5

<210> 1
<211> 13498
<212> DNA
<213> Homo sapiens

<400> 1
gctgccggga cgggtccaag atggacggcc gctcaggttc tgcttttacc tgcggcccag 60

agccccattc attgccccgg tgctgagcgg cgccgcgagt cggcccgagg cctccgggga 120

ctgccgtgcc gggcgggaga ccgccatggc gaccctggaa aagctgatga aggccttcga 180

gtccctcaag tccttccagc agcagcagca gcagcagcag cagcagcagc agcagcagca 240

gcagcagcag cagcagcagc aacagccgcc accgccgccg ccgccgccgc cgcctcctca 300

gcttcctcag ccgccgccgc aggcacagcc gctgctgcct cagccgcagc cgcccccgcc 360

gccgcccccg ccgccacccg gcccggctgt ggctgaggag ccgctgcacc gaccaaagaa 420

agaactttca gctaccaaga aagaccgtgt gaatcattgt ctgacaatat gtgaaaacat 480

agtggcacag tctgtcagaa attctccaga atttcagaaa cttctgggca tcgctatgga 540

acttttctg ctgtgcagtg atgacgcaga gtcagatgtc aggatggtgg ctgacgaatg 600

cctcaacaaa gttatcaaag ctttgatgga ttctaatctt ccaaggttac agctcgagct 660

ctataaggaa attaaaaaga atggtgcccc tcggagtttg cgtgctgccc tgtggaggtt 720

tgctgagctg gctcacctgg ttcggcctca gaaatgcagg ccttacctgg tgaaccttct 780

gccgtgcctg actcgaacaa gcaagagacc cgaagaatca gtccaggaga ccttggctgc 840

agctgttccc aaaattatgg cttcttttgg caattttgca aatgacaatg aaattaaggt 900

tttgttaaag gccttcatag cgaacctgaa gtcaagctcc cccaccattc ggcggacagc 960

ggctggatca gcagtgagca tctgccagca ctcaagaagg acacaatatt tctatagttg 1020

gctactaaat gtgctcttag gcttactcgt tcctgtcgag gatgaacact ccactctgct 1080

gattcttggc gtgctgctca ccctgaggta tttggtgccc ttgctgcagc agcaggtcaa 1140

ggacacaagc ctgaaaggca gcttcggagt gacaaggaaa gaaatggaag tctctccttc 1200

tgcagagcag cttgtccagg tttatgaact gacgttacat catacacagc accaagacca 1260

caatgttgtg accggagccc tggagctgtt gcagcagctc ttcagaacgc ctccacccga 1320

gcttctgcaa accctgaccg cagtcggggg cattgggcag ctcaccgctg ctaaggagga 1380

gtctggtggc cgaagccgta gtgggagtat tgtggaactt atagctggag ggggttcctc 1440

atgcagccct gtcctttcaa gaaaacaaaa aggcaaagtg ctcttaggag aagaagaagc 1500

cttggaggat gactctgaat cgagatcgga tgtcagcagc tctgccttaa cagcctcagt 1560

gaaggatgag atcagtggag agctggctgc ttcttcaggg gtttccactc cagggtcagc 1620

aggtcatgac atcatcacag aacagccacg gtcacagcac acactgcagg cggactcagt 1680

ggatctggcc agctgtgact tgacaagctc tgccactgat ggggatgagg aggatatctt 1740

gagccacagc tccagccagg tcagcgccgt cccatctgac cctgccatgg acctgaatga 1800

tgggacccag gcctcgtcgc ccatcagcga cagctcccag accaccaccg aagggcctga 1860

ttcagctgtt acccccttcag acagttctga aattgtgtta gacggtaccg acaaccagta 1920

tttgggcctg cagattggac agccccagga tgaagatgag gaagccacag gtattcttcc 1980

tgatgaagcc tcggaggcct tcaggaactc ttccatggcc cttcaacagg cacatttatt 2040

gaaaaacatg agtcactgca ggcagccttc tgacagcagt gttgataaat ttgtgttgag 2100

agatgaagct actgaaccgg gtgatcaaga aaacaagcct tgccgcatca aaggtgacat 2160

tggacagtcc actgatgatg actctgcacc tcttgtccat tgtgtccgcc ttttatctgc 2220

ttcgtttttg ctaacagggg gaaaaaatgt gctggttccg gacagggatg tgagggtcag 2280

cgtgaaggcc ctggccctca gctgtgtggg agcagctgtg gccctccacc cggaatcttt 2340

cttcagcaaa ctctataaag ttcctcttga caccacggaa taccctgagg aacagtatgt 2400

ctcagacatc ttgaactaca tcgatcatgg agacccacag gttcgaggag ccactgccat 2460

tctctgtggg accctcatct gctccatcct cagcaggtcc cgcttccacg tgggagattg 2520

gatgggcacc attagaaccc tcacaggaaa tacattttct ttggcggatt gcattccttt 2580

gctgcggaaa acactgaagg atgagtcttc tgttacttgc aagttagctt gtacagctgt 2640

gaggaactgt gtcatgagtc tctgcagcag cagctacagt gagttaggac tgcagctgat 2700

catcgatgtg ctgactctga ggaacagttc ctattggctg gtgaggacag agcttctgga 2760

aacccttgca gagattgact tcaggctggt gagctttttg gaggcaaaag cagaaaactt 2820

acacagaggg gctcatcatt atacagggct tttaaaactg caagaacgag tgctcaataa 2880

tgttgtcatc catttgcttg gagatgaaga ccccagggtg cgacatgttg ccgcagcatc 2940

actaattagg cttgtcccaa agctgtttta taaatgtgac caaggacaag ctgatccagt 3000

agtggccgtg gcaagagatc aaagcagtgt ttacctgaaa cttctcatgc atgagacgca 3060

gcctccatct catttctccg tcagcacaat aaccagaata tatagaggct ataacctact 3120

accaagcata acagacgtca ctatggaaaa taacctttca agagttattg cagcagtttc 3180

tcatgaacta atcacatcaa ccaccagagc actcacattt ggatgctgtg aagctttgtg 3240

tcttctttcc actgccttcc cagtttgcat ttggagttta ggttggcact gtggagtgcc 3300

tccactgagt gcctcagatg agtctaggaa gagctgtacc gttgggatgg ccacaatgat 3360

tctgaccctg ctctcgtcag cttggttccc attggatctc tcagcccatc aagatgcttt 3420

gattttggcc ggaaacttgc ttgcagccag tgctcccaaa tctctgagaa gttcatgggc 3480

ctctgaagaa gaagccaacc cagcagccac caagcaagag gaggtctggc cagccctggg 3540

ggaccgggcc ctggtgccca tggtggagca gctcttctct cacctgctga aggtgattaa 3600

catttgtgcc cacgtcctgg atgacgtggc tcctggaccc gcaataaagg cagccttgcc 3660

ttctctaaca aacccccctt ctctaagtcc catccgacga aaggggaagg agaaagaacc 3720

aggagaacaa gcatctgtac cgttgagtcc caagaaaggc agtgaggcca gtgcagcttc 3780

tagacaatct gatacctcag gtcctgttac aacaagtaaa tcctcatcac tggggagttt 3840

ctatcatctt ccttcatacc tcaaactgca tgatgtcctg aaagctacac acgctaacta 3900

caaggtcacg ctggatcttc agaacagcac ggaaaagttt ggagggtttc tccgctcagc 3960

cttggatgtt ctttctcaga tactagagct ggccacactg caggacattg ggaagtgtgt 4020

tgaagagatc ctaggatacc tgaaatcctg ctttagtcga gaaccaatga tggcaactgt 4080

ttgtgttcaa caattgttga agactctctt tggcacaaac ttggcctccc agtttgatgg 4140

cttatcttcc aaccccagca agtcacaagg ccgagcacag cgccttggct cctccagtgt 4200

gaggccaggc ttgtaccact actgcttcat ggccccgtac acccacttca cccaggccct 4260

cgctgacgcc agcctgagga acatggtgca ggcggagcag gagaacgaca cctcgggatg 4320

gtttgatgtc ctccagaaag tgtctaccca gttgaagaca aacctcacga gtgtcacaaa 4380

gaaccgtgca gataagaatg ctattcataa tcacattcgt ttgtttgaac ctcttgttat 4440

aaaagcttta aaacagtaca cgactacaac atgtgtgcag ttacagaagc aggttttaga 4500

tttgctggcg cagctggttc agttacgggt taattactgt cttctggatt cagatcaggt 4560

gtttattggc tttgtattga aacagtttga atacattgaa gtgggccagt tcagggaatc 4620

agaggcaatc attccaaaca tctttttctt cttggtatta ctatcttatg aacgctatca 4680

ttcaaaacag atcattggaa ttcctaaaat cattcagctc tgtgatggca tcatggccag 4740

tggaaggaag gctgtgacac atgccatacc ggctctgcag cccatagtcc acgacctctt 4800

tgtattaaga ggaacaaata aagctgatgc aggaaaagag cttgaaaccc aaaaagaggt 4860

ggtggtgtca atgttactga gactcatcca gtaccatcag gtgttggaga tgttcattct 4920

tgtcctgcag cagtgccaca aggagaatga agacaagtgg aagcgactgt ctcgacagat 4980

agctgacatc atcctcccaa tgttagccaa acagcagatg cacattgact ctcatgaagc 5040

ccttggagtg ttaaatacat tatttgagat tttggcccct tcctccctcc gtccggtaga 5100

catgctttta cggagtatgt tcgtcactcc aaacacaatg gcgtccgtga gcactgttca 5160

actgtggata tcgggaattc tggccatttt gagggttctg atttcccagt caactgaaga 5220

tattgttctt tctcgtattc aggagctctc cttctctccg tatttaatct cctgtacagt 5280

aattaatagg ttaagagatg gggacagtac ttcaacgcta gaagaacaca gtgaagggaa 5340

acaaataaag aatttgccag aagaaacatt ttcaaggttt ctattacaac tggttggtat 5400

tcttttagaa gacattgtta caaaacagct gaaggtggaa atgagtgagc agcaacatac 5460

tttctattgc caggaactag gcacactgct aatgtgtctg atccacatct tcaagtctgg 5520

aatgttccgg agaatcacag cagctgccac taggctgttc cgcagtgatg gctgtggcgg 5580

cagtttctac accctggaca gcttgaactt gcgggctcgt tccatgatca ccacccaccc 5640

ggccctggtg ctgctctggt gtcagatact gctgcttgtc aaccacaccg actaccgctg 5700

gtgggcagaa gtgcagcaga ccccgaaaag acacagtctg tccagcacaa agttacttag 5760

tccccagatg tctggagaag aggaggattc tgacttggca gccaaacttg gaatgtgcaa 5820

tagagaaata gtacgaagag gggctctcat tctcttctgt gattatgtct gtcagaacct 5880

ccatgactcc gagcacttaa cgtggctcat tgtaaatcac attcaagatc tgatcagcct 5940

ttcccacgag cctccagtac aggacttcat cagtgccgtt catcggaact ctgctgccag 6000

cggcctgttc atccaggcaa ttcagtctcg ttgtgaaaac ctttcaactc caaccatgct 6060

gaagaaaact cttcagtgct tggaggggat ccatctcagc cagtcgggag ctgtgctcac 6120

gctgtatgtg gacaggcttc tgtgcacccc tttccgtgtg ctggctcgca tggtcgacat 6180

ccttgcttgt cgccgggtag aaatgcttct ggctgcaaat ttacagagca gcatggccca 6240

gttgccaatg gaagaactca acagaatcca ggaatacctt cagagcagcg ggctcgctca 6300

gagacaccaa aggctctatt ccctgctgga caggtttcgt ctctccacca tgcaagactc 6360

acttagtccc tctcctccag tctcttccca cccgctggac ggggatgggc acgtgtcact 6420

ggaaacagtg agtccggaca aagactggta cgttcatctt gtcaaatccc agtgttggac 6480

caggtcagat tctgcactgc tggaaggtgc agagctggtg aatcggattc ctgctgaaga 6540

tatgaatgcc ttcatgatga actcggagtt caacctaagc ctgctagctc catgcttaag 6600

cctagggatg agtgaaattt ctggtggcca gaagagtgcc ctttttgaag cagcccgtga 6660

ggtgactctg gcccgtgtga gcggcaccgt gcagcagctc cctgctgtcc atcatgtctt 6720

ccagcccgag ctgcctgcag agccggcggc ctactggagc aagttgaatg atctgtttgg 6780

ggatgctgca ctgtatcagt ccctgcccac tctggcccgg gccctggcac agtacctggt 6840

ggtggtctcc aaactgccca gtcatttgca ccttcctcct gagaaagaga aggacattgt 6900

gaaattcgtg gtggcaaccc ttgaggccct gtcctggcat ttgatccatg agcagatccc 6960

gctgagtctg gatctccagg cagggctgga ctgctgctgc ctggccctgc agctgcctgg 7020

cctctggagc gtggtctcct ccacagagtt tgtgacccac gcctgctccc tcatctactg 7080

tgtgcacttc atcctggagg ccgttgcagt gcagcctgga gagcagcttc ttagtccaga 7140

aagaaggaca aataccccaa aagccatcag cgaggaggag gaggaagtag atccaaacac 7200

acagaatcct aagtatatca ctgcagcctg tgagatggtg gcagaaatgg tggagtctct 7260

gcagtcggtg ttggccttgg gtcataaaag gaatagcggc gtgccggcgt ttctcacgcc 7320

attgctaagg aacatcatca tcagcctggc ccgcctgccc cttgtcaaca gctacacacg 7380

tgtgccccca ctggtgtgga agcttggatg gtcacccaaa ccgggagggg attttggcac 7440

agcattccct gagatccccg tggagttcct ccaggaaaag gaagtcttta aggagttcat 7500

ctaccgcatc aacacactag gctggaccag tcgtactcag tttgaagaaa cttgggccac 7560

cctccttggt gtcctggtga cgcagcccct cgtgatggag caggaggaga gcccaccaga 7620

agaagacaca gagaggaccc agatcaacgt cctggccgtg caggccatca cctcactggt 7680

gctcagtgca atgactgtgc ctgtggccgg caacccagct gtaagctgct tggagcagca 7740

gccccggaac aagcctctga aagctctcga caccaggttt gggaggaagc tgagcattat 7800

cagagggatt gtggagcaag agattcaagc aatggtttca aagagagaga atattgccac 7860

ccatcattta tatcaggcat gggatcctgt cccttctctg tctccggcta ctacaggtgc 7920

cctcatcagc cacgagaagc tgctgctaca gatcaacccc gagcgggagc tggggagcat 7980

gagctacaaa ctcggccagg tgtccataca ctccgtgtgg ctggggaaca gcatcacacc 8040

cctgagggag gaggaatggg acgaggaaga ggaggaggag gccgacgccc ctgcaccttc 8100

gtcaccaccc acgtctccag tcaactccag gaaacaccgg gctggagttg acatccactc 8160

ctgttcgcag tttttgcttg agttgtacag ccgctggatc ctgccgtcca gctcagccag 8220

gaggaccccg gccatcctga tcagtgaggt ggtcagatcc cttctagtgg tctcagactt 8280

gttcaccgag cgcaaccagt ttgagctgat gtatgtgacg ctgacagaac tgcgaagggt 8340

gcacccttca gaagacgaga tcctcgctca gtacctggtg cctgccacct gcaaggcagc 8400

tgccgtcctt gggatggaca aggccgtggc ggagcctgtc agccgcctgc tggagagcac 8460

gctcaggagc agccacctgc ccagcagggt tggagccctg cacggcgtcc tctatgtgct 8520

ggagtgcgac ctgctggacg acactgccaa gcagctcatc ccggtcatca gcgactatct 8580

cctctccaac ctgaaaggga tcgcccactg cgtgaacatt cacagccagc agcacgtact 8640

ggtcatgtgt gccactgcgt tttacctcat tgagaactat cctctggacg tagggccgga 8700

attttcagca tcaataatac agatgtgtgg ggtgatgctg tctggaagtg aggagtccac 8760

cccctccatc atttaccact gtgccctcag aggcctggag cgcctcctgc tctctgagca 8820

gctctcccgc ctggatgcag aatcgctggt caagctgagt gtggacagag tgaacgtgca 8880

cagcccgcac cgggccatgg cggctctggg cctgatgctc acctgcatgt acacaggaaa 8940

ggagaaagtc agtccgggta gaacttcaga ccctaatcct gcagcccccg acagcgagtc 9000

agtgattgtt gctatggagc gggtatctgt tcttttgat aggatcagga aaggctttcc 9060

ttgtgaagcc agagtggtgg ccaggatcct gccccagttt ctagacgact tcttcccacc 9120

ccaggacatc atgaacaaag tcatcggaga gtttctgtcc aaccagcagc catacccca 9180

gttcatggcc accgtggtgt ataaggtgtt tcagactctg cacagcaccg ggcagtcgtc 9240

catggtccgg gactgggtca tgctgtccct ctccaacttc acgcagaggg ccccggtcgc 9300

catggccacg tggagcctct cctgcttctt tgtcagcgcg tccaccagcc cgtgggtcgc 9360

ggcgatcctc ccacatgtca tcagcaggat gggcaagctg gagcaggtgg acgtgaacct 9420

tttctgcctg gtcgccacag acttctacag acaccagata gaggaggagc tcgaccgcag 9480

ggccttccag tctgtgcttg aggtggttgc agccccagga agcccatatc accggctgct 9540

gacttgttta cgaaatgtcc acaaggtcac cacctgctga gcgccatggt gggagagact 9600

gtgaggcggc agctggggcc ggagcctttg gaagtctgcg cccttgtgcc ctgcctccac 9660

cgagccagct tggtccctat gggcttccgc acatgccgcg ggcggccagg caacgtgcgt 9720

gtctctgcca tgtggcagaa gtgctctttg tggcagtggc caggcaggga gtgtctgcag 9780

tcctggtggg gctgagcctg aggccttcca gaaagcagga gcagctgtgc tgcaccccat 9840

gtgggtgacc aggtcctttc tcctgatagt cacctgctgg ttgttgccag gttgcagctg 9900

ctcttgcatc tgggccagaa gtcctccctc ctgcaggctg gctgttggcc cctctgctgt 9960

cctgcagtag aaggtgccgt gagcaggctt tgggaacact ggcctgggtc tccctggtgg 10020

ggtgtgcatg ccacgccccg tgtctggatg cacagatgcc atggcctgtg ctgggccagt 10080

ggctgggggt gctagacacc cggcaccatt ctcccttctc tcttttcttc tcaggattta 10140

aaatttaatt atatcagtaa agagattaat tttaacgtaa ctctttctat gcccgtgtaa 10200

agtatgtgaa tcgcaaggcc tgtgctgcat gcgacagcgt ccggggtggt ggacagggcc 10260

cccggccacg ctccctctcc tgtagccact ggcatagccc tcctgagcac ccgctgacat 10320

ttccgttgta catgttcctg tttatgcatt cacaaggtga ctgggatgta gagaggcgtt 10380

agtgggcagg tggccacagc aggactgagg acaggccccc attatcctag gggtgcgctc 10440

acctgcagcc cctcctcctc gggcacagac gactgtcgtt ctccacccac cagtcaggga 10500

cagcagcctc cctgtcactc agctgagaag gccagccctc cctggctgtg agcagcctcc 10560

actgtgtcca gagacatggg cctcccactc ctgttccttg ctagccctgg ggtggcgtct 10620

gcctaggagc tggctggcag gtgttgggac ctgctgctcc atggatgcat gccctaagag 10680

tgtcactgag ctgtgttttg tctgagcctc tctcggtcaa cagcaaagct tggtgtcttg 10740

gcactgttag tgacagagcc cagcatccct tctgcccccg ttccagctga catcttgcac 10800

ggtgacccct tttagtcagg agagtgcaga tctgtgctca tcggagactg ccccacggcc 10860

ctgtcagagc cgccactcct atccccaggc caggtccctg gaccagcctc ctgtttgcag 10920

gcccagagga gccaagtcat taaaatggaa gtggattctg gatggccggg ctgctgctga 10980

tgtaggagct ggatttggga gctctgcttg ccgactggct gtgagacgag gcaggggctc 11040

tgcttcctca gccctagagg cgagccaggc aaggttggcg actgtcatgt ggcttggttt 11100

ggtcatgccc gtcgatgttt tgggtattga atgtggtaag tggaggaaat gttggaactc 11160

tgtgcaggtg ctgccttgag acccccaagc ttccacctgt ccctctccta tgtggcagct 11220

ggggagcagc tgagatgtgg acttgtatgc tgcccacata cgtgaggggg agctgaaagg 11280

gagcccctcc tctgagcagc ctctgccagg cctgtatgag gcttttccca ccagctccca 11340

acagaggcct cccccagcca ggaccacctc gtcctcgtgg cggggcagca ggagcggtag 11400

aaaggggtcc gatgtttgag gaggccctta agggaagcta ctgaattata acacgtaaga 11460

aaatcaccat tccgtattgg ttgggggctc ctgtttctca tcctagcttt ttcctggaaa 11520

gcccgctaga aggtttggga acgaggggaa agttctcaga actgttggct gctccccacc 11580

cgcctcccgc ctcccccgca ggttatgtca gcagctctga gacagcagta tcacaggcca 11640

gatgttgttc ctggctagat gtttacattt gtaagaaata acactgtgaa tgtaaaacag 11700

agccattccc ttggaatgca tatcgctggg ctcaacatag agtttgtctt cctcttgttt 11760

acgacgtgat ctaaaccagt ccttagcaag gggctcagaa caccccgctc tggcagtagg 11820

tgtcccccac ccccaaagac ctgcctgtgt gctccggaga tgaatatgag ctcattagta 11880

aaaatgactt cacccacgca tatacataaa gtatccatgc atgtgcatat agacacatct 11940

ataattttac acacacacct ctcaagacgg agatgcatgg cctctaagag tgcccgtgtc 12000

ggttcttcct ggaagttgac tttccttaga cccgccaggt caagttagcc gcgtgacgga 12060

catccaggcg tgggacgtgg tcagggcagg gctcattcat tgcccactag gatcccactg 12120

gcgaagatgg tctccatatc agctctctgc agaagggagg aagactttat catgttccta 12180

aaaatctgtg gcaagcaccc atcgtattat ccaaattttg ttgcaaatgt gattaatttg 12240

gttgtcaagt tttgggggtg ggctgtgggg agattgcttt tgttttcctg ctggtaatat 12300

cgggaaagat tttaatgaaa ccagggtaga attgtttggc aatgcactga agcgtgtttc 12360

tttcccaaaa tgtgcctccc ttccgctgcg ggcccagctg agtctatgta ggtgatgttt 12420

ccagctgcca agtgctcttt gttactgtcc accctcattt ctgccagcgc atgtgtcctt 12480

tcaaggggaa aatgtgaagc tgaaccccct ccagacaccc agaatgtagc atctgagaag 12540

gccctgtgcc ctaaaggaca cccctcgccc ccatcttcat ggagggggtc atttcagagc 12600

cctcggagcc aatgaacagc tcctcctctt ggagctgaga tgagccccac gtggagctcg 12660

ggacggatag tagacagcaa taactcggtg tgtggccgcc tggcaggtgg aacttcctcc 12720

cgttgcgggg tggagtgagg ttagttctgt gtgtctggtg ggtggagtca ggcttctctt 12780

gctacctgtg agcatccttc ccagcagaca tcctcatcgg gctttgtccc tcccccgctt 12840

cctccctctg cggggaggac ccgggaccac agctgctggc cagggtagac ttggagctgt 12900

cctccagagg ggtcacgtgt aggagtgaga agaaggaaga tcttgagagc tgctgaggga 12960

ccttggagag ctcaggatgg ctcagacgag gacactcgct tgccgggcct gggcctcctg 13020

ggaaggaggg agctgctcag aatgccgcat gacaactgaa ggcaacctgg aaggttcagg 13080

ggccgctctt cccccatgtg cctgtcacgc tctggtgcag tcaaaggaac gccttcccct 13140

cagttgtttc taagagcaga gtctcccgct gcaatctggg tggtaactgc cagccttgga 13200

ggatcgtggc caacgtggac ctgcctacgg agggtgggct ctgacccaag tggggcctcc 13260

ttgtccaggt ctcactgctt tgcaccgtgg tcagagggac tgtcagctga gcttgagctc 13320

ccctggagcc agcagggctg tgatgggcga gtcccggagc cccacccaga cctgaatgct 13380

tctgagagca aagggaagga ctgacgagag atgtatattt aatttttaa ctgctgcaaa 13440

cattgtacat ccaaattaaa ggaaaaaaat ggaaaccatc aaaaaaaaaa aaaaaaaa 13498

<210> 2
<211> 13237
<212> DNA
<213> Mus musculus

<400> 2
gcactcgccg cgagggttgc cgggacgggc ccaagatggc tgagcgcctt ggttccgctt 60

ctgcctgccg cgcagagccc cattcattgc cttgctgcta agtggcgccg cgtagtgcca 120

gtaggctcca agtcttcagg gtctgtccca tcgggcagga agccgtcatg gcaaccctgg 180

aaaagctgat gaaggctttc gagtcgctca agtcgtttca gcagcaacag cagcagcagc 240

caccgccgca ggcgccgccg ccaccgccgc cgccgcctcc gcctcaaccc cctcagccgc 300

cgcctcaggg gcagccgccg ccgccaccac cgccgctgcc aggtccggca gaggaaccgc 360

tgcaccgacc aaagaaggaa ctctcagcca ccaagaaaga ccgtgtgaat cattgtctaa 420

caatatgtga aaacattgtg gcacagtctc tcagaaattc tccagaattt cagaaactct 480

tgggcatcgc tatggaactg tttctgctgt gcagtgacga tgcggagtca gatgtcagaa 540

tggtggctga tgagtgcctc aacaaagtca tcaaagcttt gatggattct aatcttccaa 600

ggctacagtt agaactctat aaggaaatta aaaagaatgg tgctcctcga agtttgcgtg 660

ctgccctgtg gaggtttgct gagctggctc acctggttcg acctcagaag tgcaggcctt 720

acctggtgaa tcttcttcca tgcctgaccc gaacaagcaa aagaccggag gaatcagttc 780

aggagacctt ggctgcagct gttcctaaaa ttatggcttc ttttggcaat ttcgcaaatg 840

acaatgaaat taaggttctg ttgaaagctt tcatagcaaa tctgaagtca agctctccca 900

ccgtgcggcg gacagcagcc ggctcagccg tgagcatctg ccaacattct aggaggacac 960

agtacttcta caactggctc cttaatgtcc tcctaggtct gctggttccc atggaagaag 1020

agcactccac tctcctgatc ctcggtgtgt tgctcacatt gaggtgtcta gtgcccttgc 1080

tccagcagca ggtcaaggac acaagtctaa aaggcagctt tggggtgaca cggaaagaaa 1140

tggaagtctc tccttctaca gagcagcttg tccaggttta tgaactgact ttgcatcata 1200

ctcagcacca agaccacaat gtggtgacag gggcactgga gctcctgcag cagctcttcc 1260

gtacccctcc acctgaactc ctgcaagcac tgaccacacc aggagggctt gggcagctca 1320

ctctggttca agaagaggcc cggggccgag gccgcagcgg gagcatcgtg gagcttttag 1380

ctggaggggg ttcctcgtgc agccctgtcc tctcaagaaa gcagaaaggc aaagtgctct 1440

taggagagga agaagccttg gaagatgact cggagtccag gtcagatgtc agcagctcag 1500

cctttgcagc ctctgtgaag agtgagattg gtggagagct cgctgcttct tcaggtgttt 1560

ccactcctgg ttctgttggt cacgacatca tcactgagca gcctagatcc cagcacacac 1620

ttcaagcaga ctctgtggat ttgtccggct gtgacctgac cagtgctgct actgatgggg 1680

atgaggagga catcttgagc cacagctcca gccagttcag tgctgtccca tccgaccctg 1740

ccatggacct gaatgatggg acccaggcct cctcacccat cagtgacagt tctcagacca 1800

ccactgaagg acctgattca gctgtgactc cttcggacag ttctgaaatt gtgttagatg 1860

gtgccgatag ccagtattta ggcatgcaga taggacagcc acaggaggac gatgaggagg 1920

gagctgcagg tgttctttct ggtgaagtct cagatgtttt cagaaactct tctctggccc 1980

ttcaacaggc acacttgttg gaaagaatgg gccatagcag gcagccttcc gacagcagta 2040

tagataagta tgtaacaaga gatgaggttg ctgaagccag tgatccagaa agcaagcctt 2100

gccgaatcaa aggtgacata ggacagccta atgatgatga ttctgctcct ctggtacatt 2160

gtgtccgtct tttatctgct tccttttttgt taactggtga aaagaaagca ctggttccag 2220

acagagacgt gagagtcagt gtgaaggccc tggccctcag ctgcattggt gcggctgtgg 2280

cccttcatcc agagtcgttc ttcagcagac tgtacaaagt acctcttaat accacggaaa 2340

gtactgagga acagtatgtt tctgacatct tgaactacat cgatcatgga gacccacagg 2400

tccgaggagc tactgccatt ctctgtggga cccttgtcta ctccatcctc agtaggtccc 2460

gtctccgtgt tggtgactgg ctgggcaaca tcagaaccct gacaggaaat acattttctc 2520

tggtggactg cattccttta ctgcagaaaa cgttgaagga tgaatcttct gttacttgca 2580

agttggcttg tacagctgtg aggcactgtg tcctgagtct ttgcagcagc agctacagtg 2640

acttgggatt acaactgctt attgatatgc tgcctctgaa gaacagctcc tactggctgg 2700

tgaggaccga actgctggac actctggcag agattgactt caggctcgtg agtttttgg 2760

aggcaaaagc agaaagttta caccgagggg ctcatcatta tacagggttt ctaaaactac 2820

aagaacgagt actcaataat gtggtcattt atttgcttgg agatgaagac cccagggttc 2880

gacatgttgc tgcaacatca ttaacaaggc ttgtcccaaa gctgttttac aagtgtgacc 2940

aaggacaagc tgatccagtt gtggctgtag cgagggatca gagcagtgtc tacctgaagc 3000

tcctcatgca tgagacccag ccaccatcac acttttctgt cagcaccatc accagaatct 3060

atagaggcta tagcttactg ccaagtataa cagatgtcac catggaaaac aatctctcaa 3120

gagttgttgc cgcagtttct catgaactca ttacgtcaac aacacgggca ctcacatttg 3180

gatgctgtga agccttgtgt cttctctcag cagcctttcc agtttgcact tggagtttag 3240

gatggcactg tggagtgccc ccactgagtg cctctgatga gtccaggaag agctgcactg 3300

ttgggatggc ctccatgatt ctcaccttgc tttcatcagc ttggttccca ctggatctct 3360

cagcccatca ggatgccttg attttggctg gaaacttgct agcagcgagt gcccccaagt 3420

ctctgagaag ttcatggacc tctgaagaag aagccaactc agcagccacc agacaggagg 3480

aaatctggcc tgctctgggg gatcggactc tagtgccctt ggtggagcag cttttctccc 3540

acctgctgaa ggtgatcaat atctgtgctc atgtcttgga cgatgtgact cctggaccag 3600

caatcaaggc agccttgcct tctctaacaa acccccccttc tctaagtcct attcgacgga 3660

aagggaagga gaaagaacct ggagaacaag cttctactcc aatgagtccc aagaaagttg 3720

gtgaggccag tgcagcctct cgacaatcag acacctcagg acctgtcaca gcaagtaaat 3780

catcctcact ggggagtttc taccatctcc cctcctacct caaactgcat gatgtcctga 3840

aagccactca cgccaactat aaggtcacct tagatcttca gaacagcact gaaaagtttg 3900

gggggttcct gcgctctgcc ttggacgtcc tttctcagat tctagagctg gcgacactgc 3960

aggacattgg aaagtgtgtt gaagaggtcc ttggatacct gaaatcctgc tttagtcgag 4020

aaccaatgat ggcaactgtc tgtgtgcagc agctattgaa gactctcttt gggacaaact 4080

tagcctcaca gtttgatggc ttatcttcca accccagcaa gtctcagtgc cgagctcagc 4140

gccttggctc ttcaagtgtg aggcccggct tatatcacta ctgcttcatg gcaccataca 4200

cgcacttcac acaggccttg gctgacgcaa gcctgaggaa catggtgcag gcggagcagg 4260

agcgtgatgc ctcggggtgg tttgatgtac tccagaaagt gtctgcccaa ttgaagacga 4320

acctaacaag cgtcacaaag aaccgtgcag ataagaatgc tattcataat cacattaggt 4380

tatttgagcc tcttgttata aaagcattga agcagtacac cacgacaaca tctgtacaat 4440

tgcagaagca ggttttggat ttgctggcac agctggttca gctacgggtc aattactgtc 4500

tactggattc agaccaggtg ttcatcgggt ttgtgctgaa gcagtttgag tacattgaag 4560

tgggccagtt cagggaatca gaggcaatta ttccaaatat atttttcttc ctggtattac 4620

tgtcttatga gcgctaccat tcaaaacaga tcattggaat tcctaaaatc atccagctgt 4680

gtgatggcat catggccagt ggaaggaagg ccgttacaca tgctatacct gctctgcagc 4740

ccattgtcca tgacctcttt gtgttacgag gaacaaataa agctgatgca gggaaagagc 4800

ttgagacaca gaaggaggtg gtggtctcca tgctgttacg actcatccag taccatcagg 4860

tgctggagat gttcatcctt gtcctgcagc agtgccacaa ggagaatgag gacaagtgga 4920

aacggctctc tcggcaggtc gcagacatca tcctgcccat gttggccaag cagcagatgc 4980

atattgactc tcatgaagcc cttggagtgt taaatacctt gtttgagatt ttggctcctt 5040

cctccctacg tcctgtggac atgcttttgc ggagtatgtt catcactcca agcacaatgg 5100

catctgtaag cactgtgcag ctgtggatat ctggaatcct cgccattctg agggttctca 5160

tttcccagtc aaccgaggac attgttcttt gtcgtattca ggagctctcc ttctctccac 5220

acttgctctc ctgtccagtg attaacaggt taaggggtgg aggcggtaat gtaacactag 5280

gagaatgcag cgaagggaaa caaaagagtt tgccagaaga tacattctca aggtttcttt 5340

tacagctggt tggtattctt ctagaagaca tcgttacaaa acagctcaaa gtggacatga 5400

gtgaacagca gcatacgttc tactgccaag agctaggcac actgctcatg tgtctgatcc 5460

acatattcaa atctggaatg ttccggagaa tcacagcagc tgccactaga ctcttcacca 5520

gtgatggctg tgaaggcagc ttctatactc tagagagcct gaatgcacgg gtccgatcca 5580

tggtgcccac gcacccagcc ctggtactgc tctggtgtca gatcctactt ctcatcaacc 5640

acactgacca ccggtggtgg gcagaggtgc agcagacacc caagagacac agtctgtcct 5700

gcacgaagtc acttaacccc cagaagtctg gcgaagagga ggattctggc tcggcagctc 5760

agctgggaat gtgcaataga gaaatagtgc gaagaggggc ccttattctc ttctgtgatt 5820

atgtctgtca gaatctccat gactcagaac acttaacatg gctcattgtg aatcacattc 5880

aagatctgat cagcttgtct catgagcctc cagtacaaga ctttattagt gccattcatc 5940

gtaattctgc agctagtggt ctttttatcc aggcaattca gtctcgctgt gaaaatcttt 6000

caacgccaac cactctgaag aaaacacttc agtgcttgga aggcatccat ctcagccagt 6060

ctggtgctgt gctcacacta tatgtggaca ggctcctggg cacccccttc cgtgcgctgg 6120

ctcgcatggt cgacaccctg gcctgtcgcc gggtagaaat gcttttggct gcaaatttac 6180

agagcagcat ggcccagttg ccagaggagg aactaaacag aatccaagaa cacctccaga 6240

acagtgggct tgcacaaaga caccaaaggc tctattcact gctggacaga ttccgactct 6300

ctactgtgca ggactcactt agccccttgc ccccagtcac ttcccaccca ctggatgggg 6360

atgggcacac atctctggaa acagtgagtc cagacaaaga ctggtacctc cagcttgtca 6420

gatcccagtg ttggaccaga tcagattctg cactgctgga aggtgcagag ctggtcaacc 6480

gtatccctgc tgaagatatg aatgacttca tgatgagctc ggagttcaac ctaagccttt 6540

tggctccctg tttaagcctt ggcatgagcg agattgctaa tggccaaaag agtcccctct 6600

ttgaagcagc ccgtggggtg attctgaacc gggtgaccag tgttgttcag cagcttcctg 6660

ctgtccatca agtcttccag cccttcctgc ctatagagcc cacggcctac tggaacaagt 6720

tgaatgatct gcttggtgat accacatcat accagtctct gaccatactt gcccgtgccc 6780

tggcacagta cctggtggtg ctctccaaag tgcctgctca tttgcacctt cctcctgaga 6840

aggaggggga cacggtgaag tttgtggtaa tgacagttga ggccctgtca tggcatttga 6900

tccatgagca gatcccactg agtctggacc tccaagccgg gctagactgc tgctgcctgg 6960

cactacaggt gcctggcctc tgggggtgc tgtcctcccc agagtacgtg actcatgcct 7020

gctccctcat ccattgtgtg cgattcatcc tggaagccat tgcagtacaa cctggagacc 7080

agcttctcgg tcctgaaagc aggtcacata ctccaagagc tgtcagaaag gaggaagtag 7140

actcagatat acaaaacctc agtcatgtca cttcggcctg cgagatggtg gcagacatgg 7200

tggaatccct gcagtcagtg ctggccttgg gccacaagag gaacagcacc ctgccttcat 7260

ttctcacagc tgtgctgaag aacattgtta tcagtctggc ccgactcccc ctagttaaca 7320

gctatactcg tgtgcctcct ctggtatgga aactcgggtg gtcacccaag cctggagggg 7380

attttggcac agtgtttcct gagatccctg tagagttcct ccaggagaag gagatcctca 7440

aggagttcat ctaccgcatc aacaccctag ggtggaccaa tcgtacccag ttcgaagaaa 7500

cttgggccac cctccttggt gtcctggtga ctcagcccct ggtgatggaa caggaagaga 7560

gcccaccaga ggaagacaca gaaagaaccc agatccatgt cctggctgtg caggccatca 7620

cctctctagt gctcagtgca atgaccgtgc ctgtggctgg caatccagct gtaagctgct 7680

tggagcaaca gccccggaac aagccactga aggctctcga taccagattt ggaagaaagc 7740

tgagcatgat cagagggatt gtagaacaag aaatccaaga gatggtttcc cagagagaga 7800

atactgccac tcaccattct caccaggcgt gggatcctgt cccttctctg ttaccagcta 7860

ctacaggtgc tcttatcagc catgacaagc tgctgctgca gatcaaccca gagcgggagc 7920

caggcaacat gagctacaag ctgggccagg tgtccataca ctccgtgtgg ctgggaaata 7980

acatcacacc cctgagagag gaggaatggg atgaggaaga agaggaagaa agtgatgtcc 8040

ctgcaccaac gtcaccacct gtgtctccag tcaattccag aaaacaccgt gccggggttg 8100

atattcactc ctgttcgcag tttctgcttg aattgtacag ccgatggatc ctgccatcca 8160

gtgcagccag aaggaccccc gtcatcctga tcagtgaagt ggttcgatct cttcttgtag 8220

tgtcagactt attcaccgaa cgtacccagt ttgaaatgat gtatctgacg ctgacagaac 8280

tacggagagt gcacccttca gaagatgaga tcctcattca gtacctggtg cctgccacct 8340

gtaaggcagc tgctgtcctt ggaatggaca aaactgtggc agagccagtc agccgcctac 8400

tggagagcac actgaggagc agccacctgc ccagccagat cggagccctg cacggcatcc 8460

tctatgtgtt ggagtgtgac ctcttggatg acactgcaaa gcagctcatt ccagttgtta 8520

gtgactatct gctgtccaac ctcaaaggaa tagcccactg cgtgaacatt cacagccagc 8580

agcatgtgct ggtaatgtgt gccactgctt tctacctgat ggaaaactac cctctggatg 8640

tgggaccaga attttcagca tctgtgatac agatgtgtgg agtaatgctg tctggaagtg 8700

aggagtccac cccctccatc atttaccact gtgccctccg gggtctggag cggctcctgc 8760

tgtctgagca gctatctcgg ctagacacag agtccttggt caagctaagt gtggacagag 8820

tgaatgtaca aagcccacac agggccatgg cagccctagg cctgatgctc acctgcatgt 8880

acacaggaaa ggaaaaagcc agtccaggca gagcttctga ccccagccct gctacacctg 8940

acagcgagtc tgtgattgta gctatggagc gagtgtctgt tctctttgat aggatccgca 9000

agggatttcc ctgtgaagcc agggttgtgg caaggatcct gcctcagttc ctagatgact 9060

tctttccacc tcaagatgtc atgaacaaag tcattggaga gttcctgtcc aatcagcagc 9120

catacccaca gttcatggcc actgtagttt acaaggtttt tcagactctg cacagtgctg 9180

ggcagtcatc catggtccgg gactgggtca tgctgtccct gtccaacttc acacaaagaa 9240

ctccagttgc catggccatg tggagcctct cctgcttcct tgttagcgca tctaccagcc 9300

catgggtttc tgcgatcctt ccacatgtca tcagcaggat gggcaaactg gaacaggtgg 9360

atgtgaacct tttctgcctg gttgccacag acttctacag acaccagata gaggaggaat 9420

tcgaccgcag ggctttccag tctgtgtttg aggtggtggc tgcaccagga agtccatacc 9480

acaggctgct tgcttgtttg caaaatgttc acaaggtcac cacctgctga gtagtgcctg 9540

tgggacaaaa ggctgaaaga aggcagctgc tggggcctga gcctccagga gcctgctcca 9600

agcttctgct ggggctgcct tggccgtgca ggcttccact tgtgtcaagt ggacagccag 9660

gcaatggcag gagtgctttg caatgagggc tatgcaggga acatgcacta tgttggggtt 9720

gagcctgagt cctgggtcct ggcctcgctg cagctggtga cagtgctagg ttgaccaggt 9780

gtttgtcttt ttcctagtgt tcccctggcc atagtcgcca ggttgcagct gccctggtat 9840

gtggatcaga agtcctagct cttgccagat ggttctgagc ccgcctgctc cactgggctg 9900

gagagctccc tcccacattt acccagtagg catacctgcc acaccagtgt ctggacacaa 9960

aatgaatggt gtgtggggct gggaactggg gctgccaggt gtccagcacc attttccttt 10020

ctgtgttttc ttctcaggag ttaaaattta attatatcag taaagagatt aattttaatg 10080

taacttttcc tatgcccgtg taaagtgtgt gacttggcaa ggcctgtgct gcatgtgaca 10140

aagtttatgg aagtggaggg gccttctggc cgccactccc tctcctgtag ctactcagtc 10200

tagtcgggca ggtccctcct gtagccctcc caacaccctg tggcacttgc acttcataca 10260

gctccctttt cttatgcatt ccattaagcc agcacagaga gaggtgttgg tattgactgc 10320

ctgtgtgaga atcctgcctg tggcctaact gaggaactga aaaactgact tccactgtta 10380

gagttataag aggcttgccc tgtggcagct gccctcctct ccccttccca ggcatgactg 10440

tcaagctatc tcctccctgg tgttgatgca ctctcctagt ctctcagcct gggtagaaac 10500

agcatctgct ggacccaaag tggctatccc aataacctca tccctggttg tggctgacct 10560

gcactgtagc ctgcccacac accagctgac cattgtggat gctgtctgtc cctttgtatc 10620

ttctgcatgg ttgggacctg agaagtgctg acctgattac cccaaaggtg tctctgagct 10680

atggtttgtt ggtttgtctc agtttctcat agtcaaggga aagcttggtg tcctagcaac 10740

agttaagaat ggacccagag cctcttttgc cccttcccat cttgccttct gtcagcccag 10800

tagagtacag acctatgcct gtcagagccc agggaggact cagctgacaa gatgaggcac 10860

caaagggaag gttcaaaatc aggtcagcct ctggcctcag acagcttccc atgctggtca 10920

gagccacctc ttcccaaagc ccaagcccag agtaaccagg tcatgttaat gaaaatgagc 10980

taccttcatt tcctggcttg gtttgggaac tctgtttgct gtttgactat atgaccaagc 11040

agattttctg ctgttccgct aagtcatatc tgtatttctc agctgtagag taggggagtg 11100

gaatagtttg gagatgtttc taggctacac aggaggaaag agcttgcagc ctgtgattaa 11160

ctaactgtgc ttcagtccat ggattgcttt cttgagaccc ttgaatttcc ctctatcttt 11220

ccatcatgac aagtagcctt gctgctggga tgcaaggttc cctaccaaac acaggttgtg 11280

gggagcctca cacttggcct gactctcctc ctatctgccc tggcaaaaac caccccaagg 11340

cgtggtaaca ggaacagtgg acatggatta ggtctttcaa gaggacgtta agggaagcta 11400

ctgaatttta atgaaagaaa ttcaccaatg ccccttgct gatttagggc ttcttcttgt 11460

caccctcaat ttcccgccta gaagtgctcg gggaccatgt gaaagttctt acagtgctgc 11520

tgccacactc tgaggttggt ccaaccgctc tgagatgagc atggtgcagg cctgattact 11580

cctcatggta gatgttcata aggaaactca atataaaatc tagagccatt caccagggga 11640

ttatatcagt gagctcaacc tcaagtttag ttggcctctt gtttagtgtg atcagaaaca 11700

attcttagta tggggcaagg acagcctctg ccacaaagtt gttgtctgct catgggtgcc 11760

acaacctaga gatgcacctg ggtacaggca ggtatgtatt tgtgtacaca cataaacaca 11820

cacacaatcc tcaaagacat atgcaaggcc tctaaaaatg cctgcctgtt ttttctgaaa 11880

gcagactttt cttgcaactg ccacatacag tcagctttgt gagtctagca tctgagaatg 11940

ggactcaatt tttaaaagtc catagctcat taaagtctca ctggagacat tgccccacct 12000

gtctaactgc aggagggact aaaacttttt atcaaattcc tcaaaaatct aaagatttcc 12060

aagctttatt taaaaacaaa agttattttg actatgaggt tttaggggta ggaggtggga 12120

tgttgtttct gtttccatgg tggtactgtc aggaaagatt ttaataaaac cagggtagaa 12180

cttttggcaa tgcacttcag catgtttctt ctccaaaatg tgcctccctc cctcccactg 12240

atggcccccc tgacatgtag gtgacttagc cactgccaag tgccctttat ggttctctca 12300

ttttgtctgc acatgtaccc ttcaggaggg aagaactgga gtggaaccac ctcctgccct 12360

gtagaatgca gtgccaggga agggaccaat cctaacaggt gccttccctg gcaggaagta 12420

ccttcccgtg agtgagtgaa gcagctctgc ttccggctca tgggacaggt tttatacagc 12480

aatagcttgt ctcacagcca cgtcacaagg agtcttgcct cccattgtgg ggctgcagaa 12540

ttggtctcct tgccacctgt gagcatcctt ccccacacag tctccttccc tccctccttc 12600

cctccctccc tccctccctc cctccgtccc tccctccctc cctcagcatt gagcactagg 12660

atcatggctg ctaccaggac aggcatgaag ctgtcctcca gggattggta tgtgggagtc 12720

gaagacactg agctgctgat gctgggtgtg ggctcaggat atcatggttg ggaaaagaat 12780

tgttcctcag tgggtctgga gcctccagga aagaagaacc aatgctgagc agtgtgacaa 12840

ctaaagatga tatcaaggtt cagggccacc ctccatgtgt gcttgtcaca ctctagagcc 12900

atcgaaggaa ctgctcccct caagtgtctc tggaaacacc ctctgccgca agctgggtgt 12960

aagataatag gtggcagaga cctatctgca gagatttggc tgcattctag ggggctcctg 13020

tccaagcctt gctgctgtat gccatgggct tcactgggaa ctaggagggc tgtgatgggt 13080

gtgccccgga gcccagccta gacctggctg tccatttcca aaaggaagga ctgacatgaa 13140

atgtatattt aaaattttta aattgcagat attgtacagt tgaattaaag aagcgattaa 13200

accacctgtt gttgctgtta aaaaaaaaaa aaaaaaa 13237

<210> 3
<211> 13189
<212> DNA
<213> Rattus norvegicus

<400> 3
gcactcgccg cgagggttgc cgggacgggc ccaagatggc tgggagcttt ggttccgctt 60

cggtctacct cgtagagccc cattcattac cttgctgcta agtggcgctg cgtagtgcga 120

ataggctcca agccttcagg gtctgtcctg tcgggcagga ggccgtcatg gcaaccctgg 180

aaaaactgat gaaggctttc gagtcgctca agtcgttcca gcagcaacag cagcagcagc 240

agccgccgcc gcaggcgccg ccaccaccgc cgccgccgcc gcctcaaccc cctcagccgc 300

cgcctcaggg gcagccgccg ccaccaccgc cgctgccagg tccggccgag gagccgctgc 360

accgaccaaa gaaggaactc tcagccacca agaaggaccg tgtgaatcac tgtctaacaa 420

tatgtgaaaa cattgtggca cagtctctca gaaattctcc agaatttcag aaactcttgg 480

gcattgctat ggaactgttt ctgctgtgca gcgacgatgc ggagtcagac gtcagaatgg 540

tggctgatga gtgcctcaac aaagtcatca aagctttgat ggactctaat cttccaaggc 600

tacagttaga actctataag gaaattaaaa agaatggtgc tcctcgaagt ttgcgtgcag 660

ctctgtggag gtttgctgag ctggctcacc tggttcgacc tcagaagtgc aggccttatc 720

tggtgaatct tcttccatgt ttgacccgaa caagcaaacg accggaggag tcagttcagg 780

agactttggc tgcagctgtt cctaaaatta tggcctcttt tggcaatttc gcgaatgaca 840

atgaaattaa ggttctattg aaagctttca tagcaaatct gaagtcaagc tctcccactg 900

tgcggcggac agcagctggg tcagcagtga gtatctgcca gcactctagg aggacacagt 960

acttctacaa ctggctcctg aatgtgctcc taggtttgct ggttcccatg gaggaagacc 1020

accccactct cctgatcctt ggtgtgttgc tcacactgag gtgtctagtg cccttgctcc 1080

agcagcaggt caaggacaca agtctaaagg gcagctttgg ggtaacacgg aaagaaatgg 1140

aagtctctcc ttctgcagag cagcttgtcc aggtttatga actgactttg catcacacac 1200

agcaccaaga ccataatgtg gtgacagggg cattggagct cctgcagcag ctcttccgta 1260

cccctccacc tgagctgctg caagcactga ccacaccagg agggctcggg cagctcactc 1320

tggttcgaga ggaagccggg ggccgaggcc gcagcgggag tatcgtggag cttttagctg 1380

gaggggttc ctcatgcagc cctgttctct caagaaagca aaaaggcaaa gtgctcttag 1440

gagaggaaga agccttggag gatgactcgg agtccaggtc agatgtcagc agctcagcct 1500

ttgcagcctc tgtgaagagt gagattggtg gagagctcgc tgcttcttct tcgggtgtct 1560

ccactcccgg ttctgtaggt cacgacatca tcactgagca gcctcgatcc cagcacacac 1620

ttcaagcaga ctctgtggat ttgtcaggct gtgacttgac cagtgctgct actgatggag 1680

atgaggaaga catcttgagc cacagctcca gccagttcag tgctgttcca tccgaccctg 1740

ccatggacct gaatgatggg acccaggcct cctcacccat cagtgacagt tctcagacca 1800

ccactgaagg acctgattca gctgtgactc cttctgacag ttctgaaatt gtcttagatg 1860

gtgctgacag ccagtattta ggcgtgcaga taggacagcc acaggaggaa gacgaggagg 1920

aagctgcagg tgttctttct ggtgaagtct cagacgtttt cagaaactct tctctggccc 1980

ttcagcaggc acacttgttg gaaagaatgg gtcatagccg gcagccttct gacagcagtg 2040

ttgataagtt tgtttcaaaa gatgaggttg ctgaagctgg ggacccagaa agcaagcctt 2100

gccgaatcaa aggtgacata ggacagccta atgatgatga ttctgctcct ctggtacatt 2160

gtgtccgtct tttatccgct tccttttttgt taactggcga aaagaaagca ctggttccag 2220

acagagatgt gagagtcagt gtgaaggccc tggccctcag ctgtattggt gcagctgtgg 2280

cccttcatcc agagtcgttc ttcagcaaac tctacaaagt acctctcagt accatggaaa 2340

gtactgagga acagtatgtc tctgacatcc tgaactacat cgatcatgga gaccctcagg 2400

tgcgaggagc tactgccatt ctctgtggga cccttgtcta ctccatcctc agcaggtccc 2460

gtctccgtgt tggtgactgg ctgggcacca tcagggccct gacaggaaat acattttctc 2520

tggtggactg cattccttta ctgcagaaaa ctttgaagga tgaatcttct gttacttgca 2580

agttggcttg tacagctgtg aggcactgtg tcctgagtct ttgcagcagc agctacagtg 2640

acttgggatt acaactgctt attgacatgc tgcctctgaa gaacagctcc tactggctgg 2700

tgaggactga actgctggaa actcttgcag agattgattt caggctggtg agtttttgg 2760

aggcaaaagc agaaagttta caccgagggg ctcatcatta tacagggttt ctaaaactac 2820

aagaacgagt actcaataat gtggtcattt atttgcttgg agatgaagac cccagggttc 2880

gacatgttgc tgcgacgaca ttgacaagac ttgtcccaaa gctgttttat aagtgtgacc 2940

aaggacaggc tgacccagtc gtggctgtag caagagatca aagtagtgtt tacctgaagc 3000

tcctcatgca tgagacccag ccaccatccc acttctccgt cagcaccata accagaatct 3060

atagaggcta cagcttacta ccaagtgtaa cagatgtcac catggaaaac aacctctcaa 3120

gagtcgttgc cgcagtttct catgaactca ttacgtcaac tacacgggca ctcacatttg 3180

ggtgctgtga agccttgtgt gttctttcag ccgcctttcc agtttgcact tggagtctag 3240

gatggcactg tggagtgccc ccactgagtg cctctgatga gtccaggaag agctgcactg 3300

ttgggatggc ctccatgatt ctcaccttgc tttcatcagc ttggttccca ctggatctct 3360

cagcccatca ggatgccttg attttggctg gaaacttgct agcagcgagt gcccccaagt 3420

ctctgagaag ctcatgggcc tcggaagaag aaggcagctc agcagccacc agacaggagg 3480

agatctggcc tgccctgggg gatcggactc tggtgcccat ggtggagcag cttttctccc 3540

acctgctgaa ggtgatcaat atctgtgctc atgtcttgga tgacgtgact cctggaccag 3600

caatcaaggc agctttgcct tctctcacaa acccccccttc tctaagtcct attcgacgga 3660

aagggaagga gaaagagccc ggagaacaaa catccactcc gatgagtccc aagaaaggtg 3720

gagaggccag tacagcctct cgacagtcag acacctcagg acctgtcaca gcgagtaaat 3780

catcttcact tgggagtttc taccatctcc cttcctacct cagactgcat gatgtcctga 3840

aagccactca cgccaactat aaggtcacct tagatcttca gaacagcact gaaaagtttg 3900

gggggttcct gcgctctgcc ttggacgtcc tttctcagat tctagagctg gcgacactgc 3960

aggacattgg aaagtgtgtt gaagaggtcc ttggatactt gaaatcctgc tttagtcgag 4020

aaccaatgat ggcgactgtc tgtgttcagc agctattgaa gactctcttt gggacaaact 4080

tagcctcaca gtttgatggc ttatcttcca accccagcaa gtctcagtgc cgagcacagc 4140

gccttggctc ttccagtgtg aggcccggct tatatcacta ctgcttcatg gcaccataca 4200

cgcacttcac gcaggctttg gctgatgcca gcctgaggaa catggtacag gcggaccagg 4260

agcacgatgc ctcagggtgg tttgatgtac tccagaaagt gtctgctcag ttgaagacga 4320

accttacaag tgtcacaaag aaccgtgcag ataagaacgc tattcataac cacattaggt 4380

tatttgagcc tcttgttata aaagcattga agcagtacac cacgacaaca tcagtacaac 4440

tgcagaagca ggttttggat ttgctggcac agctggttca gctacgggtc aattactgtc 4500

tactggattc agatcaggtg ttcatcgggt ttgtgctgaa gcagtttgag tacattgaag 4560

tgggccagtt cagggaatca gaggcaatta ttccaaatat atttttcttc ctggtactat 4620

tatcttatga gcgctaccat tcaaaacaga tcattggaat tcctaaaatc atccagctgt 4680

gtgatggcat catggccagt ggaaggaagg ctgtcacaca tgctattcct gcgctgcagc 4740

ccattgtcca tgacctcttt gtgttaagag gaacaaataa agctgatgca gggaaagagc 4800

ttgaaaccca gaaggaggtg gtggtctcaa tgctgttacg actcatccag taccatcagg 4860

tgctagagat gttcatcctc gtcctgcagc agtgccacaa agagaatgag gacaagtgga 4920

aacggctctc tcggcaggtc gcagacatca tcctgcccat gttagccaag cagcagatgc 4980

atattgactc tcatgaagcc cttggagtat taaatacctt gtttgagatt ttggctcctt 5040

cctccctacg tcctgtggac atgcttttgc ggagtatgtt catcactcca agcacaatgg 5100

catctgtaag cactgtgcag ctgtggatat ctggaatcct agccattctg agggttctca 5160

tttcccagtc aaccgaagac attgttcttt ctcgtattca ggagctctcc ttctctccat 5220

atttaatttc ctgtccagta attaacaggt taagggatgg agacagtaat ccaacactag 5280

gagaacgcag tgaagggaaa caagtaaaga atttgccaga agatacattc tcaaggtttc 5340

tcttacagct ggttggtatt cttctggaag acattgttac aaaacagctc aaagtggaca 5400

tgagtgaaca gcagcataca ttctattgcc aagagctcgg cacactgctc atgtgtctga 5460

tccacatatt caaatctgga atgttccgga gaatcacagc cgctgccact agactcttca 5520

ccagtgatgg ctgtgaaggc agcttctata ctctagatag cctgaatgca cgggtgcgag 5580

ccatggtgcc cacacaccca gctctggtac tgctctggtg tcagatccta ctgctcatca 5640

accacactga ccaccgatgg tgggccgagg tgcagcagac gcccaagaga cacagtctgt 5700

cctgcacgaa gtcactaaac ccccagatat ctgctgaaga ggattctggc tcagcagctc 5760

agcttggaat gtgcaataga gaaatagtac gaagaggggc ccttattctc ttctgtgatt 5820

atgtctgtca gaatctccat gactcagaac acttaacatg gctcattgtg aatcacattc 5880

aagatctgat cagcttgtcc cacgagcctc cagttcaaga ctttattagt gccattcatc 5940

gtaattctgc agctagtggt ctttttatcc aggcaattca gtctcgctgt gaaaatcttt 6000

caactccaac cactctgaag aaaacacttc agtgcttgga aggcatccat ctcagccagt 6060

ctggtgctgt gctcacactg tatgtggaca ggctactggg cacccctttc cgtgcgctgg 6120

ctcgcatggt cgacaccctg gcctgtcgcc gagtagaaat gcttttggct gcaaatttac 6180

agagcagcat ggcccagttg ccagaggagg aactgaacag aatccaggaa cacctccaga 6240

acactgggct tgcacaaaga caccaaaggc tctattcact gctggacaga ttccgactct 6300

ctactgtgca ggactcactt agccccttgc ccccagtcac ttcccaccct ctggatgggg 6360

atgggcacac atccctggaa acagtgaatc cggacaaaga ctggtacctc cagcttgtca 6420

gatcccagtg ttggaccagg tcagattctg cactgctgga aggtgcagag ctggtgaacc 6480

gtatccctgc tgaagatatg agtgacttca tgatgagctc ggagttcaac ctaagccttt 6540

tggctccctg cttaagcctt ggcatgagcg agattgctaa tggccaaaag agtccccttt 6600

ttgaagcggc tcgtagggtg actctggacc gggtgaccaa tgtggttcag cagctgcctg 6660

cagtccatca agtcttccag cctttcctgc ctacagaacc cacagcctac tggagcaagc 6720

tgaatgatct ctttggtgat accacatcat accagtctct gaccacactt gcccgtgccc 6780

tggcacagta cctggtggtg ctctccaaag tgcctgctcc tttgcacctt cctcctgaga 6840

aggaggggca cacggtgaag tttgtggtaa tgacacttga ggccctgtca tggcatttga 6900

tccatgagca gatcccactg agtctggacc tccaagccgg cctagactgc tgctgcctgg 6960

cactgcaggt gcctggcctc tgggggggtgc tgtcctcccc agagtacgtg actcatactt 7020

gctcccttat ccactgtgtg cgattcatcc tggaagccat tgcagtacaa cctggagacc 7080

aacttcttgg tccggaaagc aggtcacata ctccaagggc tgtcagaaag gaggaagtag 7140

actcagatat acaaaacctc agtcacatca cttcggcctg cgagatggtg gcagacatgg 7200

tggaatccct gcagtcggtg ctggccctgg gccacaagag gaacagcacc ctaccttcat 7260

ttctcacagc tgtgctgaag aacattgttg tcagtctggc ccgcctcccc ctcgttaaca 7320

gctatactcg tgtgcctcct ctggtatgga aactcgggtg gtcacccaag cctggagggg 7380

atttcggcac agtgtttcct gagatccctg tagagttcct ccaggagaag gaggtcctca 7440

aggagttcat ctaccgcatc aacaccctag ggtggaccag tcgtactcaa ttcgaagaaa 7500

cttgggccac cctccttggt gtcctggtga ctcagccctt ggtgatggaa caggaagaga 7560

gcccaccaga ggaagacacc gaaaggaccc agatccacgt cctggctgta caggccatca 7620

cctctctagt gctcagcgca atggctgtgc ctgtggctgg caatccagct gtaagctgct 7680

tggagcaaca gccccggaac aagccactga aggctctcga taccagattt ggaagaaagt 7740

tgagcatgat cagagggatt gtagaacaag aaatccaaga gatggtttcc caaagagaga 7800

atactgccac tcatcattct caccaggcat gggatcctgt cccttctctg ttaccagcta 7860

ctacaggtgc tcttatcagc catgacaagc tgctgctgca gatcaactca gagcgggagc 7920

caggcaacat gagctacaag ctgggccagg tgtccataca ctccgtgtgg ctggggaaca 7980

acatcacacc cctgagagag gaggaatggg atgaggagga ggaggaagaa gcggatgccc 8040

ctgcgccaac atcaccacct gtgtctccag tcaattccag aaaacaccgt gctggggttg 8100

atattcactc ctgttcgcag tttctgcttg aattatacag ccgttggatc ctgccatcca 8160

gtgcagccag aaggacccct gtcatcctga tcagtgaagt ggttcgatct cttcttgtgg 8220

tgtcagactt attcactgaa cgtacccagt ttgaaatgat gtatctgacg ctgacagaac 8280

tacggagagt gcacccttca gaagatgaga tcctcattca atacctggtg cctgccacct 8340

gtaaggcagc tgctgttctt ggaatggaca aaactgtggc agagccggtc agccgcctac 8400

tggagagcac actcaggagc acccacctgc ccagccagat cggagccctg catggcatcc 8460

tctatgtgtt ggagtgtgac ctcttggatg acactgtaaa gcagctcatt ccagttgtta 8520

gtgactatct gctgtccaac ctcaaaggaa tagcccactg cgtgaacatt cacagccagc 8580

agcatgtgct ggtgatgtgt gccactgcat tctacctgat ggaaaactac cctctggatg 8640

tggggccaga attctcagca tctgtgatac agatgtgtgg agtaatgctg tctggaagtg 8700

aggagtccac cccctccatc atttaccact gtgccctccg gggtctggaa cggctcctgc 8760

tgtctgagca gctctctcgg ctagacacgg agtccttggt caagctaagt gtggacagag 8820

tgaatgtaca aagcccacac agggccatgg cagccctagg cctgatgctt acctgcatgt 8880

acacaggaaa ggaaaaagcc agtccaggca gagcttctga ccccagccct gctacccctg 8940

acagcgagtc tgtgattgta gctatggagc gagtgtctgt gctctttgac aggatccgca 9000

agggatttcc ctgtgaagcc agggtcgtgg caaggatcct gcctcagttt ctagatgact 9060

tctttccacc tcaagatgtc atgaacaaag tcattggaga gttcctgtcc aaccagcagc 9120

catacccaca gttcatggcc actgtagtat acaaggtttt tcagactctg cacagtgctg 9180

ggcagtcatc catggtccgg gactgggtta tgctgtctct gtccaacttc acacaaagaa 9240

ctccagttgc catggccatg tggagcctct cctgcttcct tgtcagtgca tctaccagcc 9300

catgggtttc tgcaatcctt ccacacgtca tcagcaggat gggcaaactg gagcaggtgg 9360

atgtgaacct tttctgcctg gttgccacag acttctacag acaccagata gaggaggaat 9420

tcgaccgcag ggctttccag tctgtgtttg aggtggtggc agcaccagga agtccatacc 9480

acaggctgct tgcttgtttg caaaatgttc acaaggtcac cgcctgctga gtagtacctg 9540

tggaacaaga ggctgagagg aggcaactgc tgtggctaca gcctccaggg gcctgcacca 9600

agcttctgct aaggctgcct tggacgtgca ggcttccact tgtgtcaagt ggacagccag 9660

gcaatggcag gagtgctttg caatgagagc tatgcaggga acatgcacta tgttggggtt 9720

gagcctgagt cctgggtcct ggcatcactg cagctggtgg cagtgctagg ttgaccaggt 9780

gtttgtcttt ttcttagtgt tgccctggcc atagttgcca ggttgcagct gccctggtat 9840

gtggaacaga atccgagctc ttgtaagatg gttctgagcc cccctgtccc actgggctgg 9900

agagctccct cccacattta cccagcaggt gtacctgcca caccagtgtc tggacacaaa 9960

gtgaatggtg tgggggctgg gaactgggac tgccaggtgt ccagcatcat tttccctttc 10020

tctgttttct tctcaggagt taaaatttaa ttatatcagt aaagagatta attttaatgt 10080

aactcttcct atgcccgtgt aaagtgtgtg acttggcaag gcctgtgctg catgtgacaa 10140

agtttatgga agtggatgcg ccttctggcc accactctct ctcctgtagc tactcagtct 10200

agtcgggcag gtccctcatg tagccctccc aacaccctat ggcacttgca cttcacacgg 10260

ctccttttc ttatgcattc catttgacta gcacagagtg gtgttggtgt taactgccct 10320

atgtgagaat cctgcttgtg gcccagctta tgagactgac ttccacttag gattaagaga 10380

ggcttgccct gcggcagacc cccaccccta ccccaggcat gactatcaag ctgtctactc 10440

actagtgttg atgcactctc ctagtctctc agcctgggca gagacagcat ctgctggacc 10500

caaagaggct atttcaataa tctcatccct ggtcgtggct gacctgggct gtagcctgcc 10560

cagacaccgg ctgaccattg tggatgctct ctgtcccttt gtatcttctg catggttggg 10620

acctgaggaa tgctagcccg atcaccccaa aggtgtctct gagctatggc ttgttggttg 10680

tctccgtttc tcttggtcaa gggaaagctc aatgtcctag caacaattaa gaatggaacc 10740

agagcctctt ttgccccttc ccatcttgcc ttctgtcagc ccttacagta cagacctatg 10800

cctttcagag ccaagggagg actcggcctg acaagatgag gcaccaaagg gaaggttcaa 10860

aatcaggtca gcctatggcc tcagacagct tcccgtgctg ctggtcagag ccgcctcttc 10920

ccaaggccca agcccagagt agccaggaca tgttgatgag aatgagccct ggacacaggc 10980

tgccttcgtc ccctggcttg gtccaggagc tctgctggct gtgtgactga gcgggctctc 11040

tgctgcccac tcagtcctgt ctgtaccaat cgactgcaga gtggggagag gagtaatttg 11100

gagctgtttc taggctacac gggaggaaag agcttgcagc ctatgactaa ttaactgtgc 11160

ttcagtctgt ggactgcttt cttaagaatt tccttctgtt ttcccatcat gatgattaaa 11220

aggctgccgg gatgcaaggt tccctaccaa acacaggtac acaggttgtg gggagcctca 11280

cacttggcct gattctattc ctatctgccc tggcaaaggc cactgcaagc cagcccagcc 11340

catcctggtg tcatggtaac aggaacagtg gacatggatc aggtctttca agaggacctt 11400

aaaggaagct actgaatttt aatgaaagaa agtcaccaat gccccctttgc tgatttaggg 11460

tttctacttg ttaccctaga tatccctcct agaagtgctt ggagaccaca tgaaagttct 11520

cacaatgctg ctgccacact ctaaagttgg tccaacagct ctgagatgag catgttgcag 11580

gcctgattac cgattactcc tcatggtaga tgttcataag aaaacagaat ataaaatcta 11640

gagccattca cctggggttt atatcagtga cttccagttt agttggtctc ttgttcagtg 11700

tggtcagaaa taactcttag tatgggacaa gaacagcctc tgctacaaag ctgttgtctg 11760

ctcatgggtg ctgcaaccta gagatgcacc tgggcacagg cacacacgca cacacgcaca 11820

cacacacaca cacacacaca cacacacctc aaagacatat gcaagacctc taaaaatgcc 11880

tgtccattct tcctgaaagc agacttttct tgtaactgcc acatacagtc agctttgtga 11940

gtctagcatc tgagaatggg actcaatttt taaaagtcca tagtcattaa agtcccactg 12000

aagacattgc cccacctgtc taactgtagg aagaactaaa acttttatc aaattcctca 12060

aaaatctatg gatttccaaa ctttatttaa aaaaaaaaaa gtaattttga ctgtgaggtt 12120

ttgggggtag gaggtgggat gttgtttctg ttttcctgct ggtattatca ggaaagattt 12180

tagtaaaacc agggtagaac tatttggcaa tgcacttaag tatgtttctt ctccaaaatg 12240

tgcctccctc ccactgatgg ccccttgaca ttaggtgact ttgccactgc caagtgccct 12300

ttactattct ctcattttgt ctgcacatgt acccttcagg agggaaggac tagagtggaa 12360

ccacctcctg ccctgtagac tgcggtgcca gggaaggcac tgaccctaac gggtgccctc 12420

cctggcagga agtaccttcc tgtgagtgag gcagctctgc tttcagctca tgggacaggg 12480

tttatacagc aatagcttgg ctcacagcca cctggcaagg agtcctgcct cccattgtag 12540

ggctgcagaa ttagtctcct cctgcctctc gtgagcatcc ttccccactg cctgcctgcc 12600

tccctccctc cctccctccc tcaacggtga gcactaggat catggctgct gccaggacag 12660

gcacgaagct gtcttccagg gattggtatg tgggagtaga agaccctgag agctgctgag 12720

gctgggtggg ggctcaggat atcacggttt ggaagagaac tgttcctcag tgggtctgga 12780

gcctccagga aagaagaacc aatgccgagc agtgtgacaa ctgaagatga catgaaggtt 12840

cagggccacc tccatgtgtg cttgtcacac tttagagcca tcgaaggaac tgctcccctc 12900

aagtgtccgg aaacaccctc tgccacaagc tgggtgtaag gtgacagaca cctatctgca 12960

gagatttgcc tgcattctag ggggctcctg tccaggcctt gctgctgtat gccatgggct 13020

tcactgggaa ctaggagggc tgtgatgggt atgccccgga gcccagccta gacctggccg 13080

tccatttcca agaggaagga ctgacatgaa atgtatattt aaaattttta aattgcagat 13140

attgtacatt tgaattaaag aagcaattaa actacccgtt gttgctgtt 13189

<210> 4
<211> 13328
<212> DNA

<213> Macaca fascicularis

<400> 4
aggcgccgcg ggggctgccg ggacgggtcc aagatggacg gccgcttcgg ttccgctttt 60

acccgcggcc cagagcccca ttcattgccc cggtgctgag cggcgctgcg agtcggcccg 120

aggcctccgg ggactgccca gccgggcggg agaccgccat ggcgaccctg gaaaagctga 180

tgaaggcctt cgagtctctc aagtccttcc agcagcagca gcagcagcag ccacccggcc 240

cggctgtggc tgaggagccg ctgcaccgac caaagaaaga actttcagct accaagaaag 300

accgtgtgaa tcattgtctg acaatatgtg aaaacatagt ggcacagtct gtcagaaatt 360

ctccagaatt tcagaaactt ctgggcatcg ctatggaact ttttctgctg tgcagtgatg 420

acgcagagtc ggatgtcaga atggtggctg atgaatgcct caacaaagtt atcaaagctt 480

tgatggattc taatcttcca aggttacagc tcgagctcta taaagaaatt aaaaagaatg 540

gtgcccctcg gagtttgcgt gctgccctgt ggaggtttgc cgagctggct cacctggttc 600

ggcctcagaa atgcaggcct tacctggtga accttctgcc gtgcctaagt cgaacaagca 660

agagacccga ggaatcagtc caggagacct tggctgcagc tgttcccaaa attatggctt 720

ctttcggcaa ttttgcaaat gacaatgaaa ttaaggtttt gttaaaggcc ttcatagcga 780

acctgaagtc aagctccccc accattcggc ggacagctgc tggatcagca gtgagcatct 840

gccagcactc aagaaggaca cagtatttct atagctggct actaaatgtg ctcttaggct 900

tactggttcc tgtcgaggag gagcactcca ccctgctgat tcttggcgtg ctgctcaccc 960

tgaggtattt ggtgcccttg ctgcagcagc aggtcaagga tacaagcctg aaaggcagct 1020

tcggagtgac acggaaagaa atggaggtct gtccttctgc ggagcagctt gtccaggttt 1080

atgaactgac gttacatcat acacagcacc aagaccacaa tgttgtgacc ggagccctgg 1140

agctgttgca gcagctcttc agaacgcctc cccccgagct tctgcaagcc ctgaccacag 1200

tgggggggcat tgggcagctc accgccgcta aggaggagtc tggtggccga agccgtagtg 1260

ggagtattgt ggaacttata gctggagggg gttcctcatg cagccctgtc ctttcaagaa 1320

aacaaaaagg caaagtgctc ttaggagaag aagaagcctt ggaggatgac tctgaatcga 1380

gatcggatgt cagcagctct gcctttgcag cctcagtgaa ggatgatatc agtggagagc 1440

tggctacttc ttcaggggtt tccactccag ggtcagcagg tcacgacatc atcacggagc 1500

agccacggtc acagcacacg ctgcaggcgg actcagtgga tctggccagc tgtgacttga 1560

caagctctgc cacggatggg gatgaggagg atatcttgag ccacagctcc agccaggtca 1620

gcgccgtccc atctgaccct gccatggacc tgaatgatgg gacccaggcc tcctcgccca 1680

tcagcgacag ctcccagacc accaccgaag ggcctgattc agctgtcacc ccttcagaca 1740

gttctgaaat tgtgttagac ggtaccgaca accagtattt gggcctgcag attggacagc 1800

cccaggatga agatgaggaa gccacaggtg ttcttcctga cgaagcctcg gaggccttca 1860

ggaactcttc catggccctt caacaagcac atttattgaa aaacatgagt cacagcaggc 1920

agccttctga cagcagtgtt gataaatttg tgttgagaga tgaagctact gaaccgggtg 1980

atcaagaaaa caagccttgc cgcatcaaag gtgacatcgg acagtccact gatgatgatt 2040

ctgcacctct tgtccattgt gtccgccttt tatctgcttc gtttttgcta acaggggaa 2100

aaaatgtgct ggttccggac cgggatgtga gggtcagcgt gaaggccctg gccctcagct 2160

gtgtgggagc agctgtggct ctccacccag aatctttctt cagcaaactc tataaagttc 2220

ctcttgacac cacagaatac cctgaggaac aatatgtctc agatatcttg aactacatcg 2280

atcatggaga cccacaggtt cgaggagcca ctgccattct ctgtgggacc ctcatctgct 2340

ccatcctcag caggtcccgc ttccacgtgg gagattggat gggcgccatt agaaccctga 2400

caggaaacac attttctttg gcggattgca ttcctttgct gcggaaaaca ctgaaggacg 2460

agtcttctgt cacttgcaag ctggcttgta cagctgtgag gcattgtgtc atgagtctct 2520

gcagcagcag ctacagtgag ttaggactgc agctgatcat cgacgtgctg actctgagga 2580

acagttccta ttggctggtg aggacagagc ttctggaaac ccttgcggag attgacttca 2640

ggctggtgag ctttttggag gcaaaagcag aaaacttaca cagaggggct catcattata 2700

cagggctttt aaagctgcaa gaacgagtgc tcaataatgt tgtcatccat ttgcttgggg 2760

atgaagaccc cagggtgcga catgttgctg cagcatcatt aattaggctt gtcccaaagc 2820

tgttttataa atgtgaccaa ggacaagctg acccagtagt ggccgtggca agagatcaaa 2880

gcagtgttta cctgaaactt ctcatgcatg agacgcagcc tccatctcat ttctccgtca 2940

gcacaataac cagaatatac agaggctata acctactacc aagcataaca gatgtcacta 3000

tggaaaataa cctttcaaga gttattgcag cagtttctca tgaactgatc acatcaacca 3060

cgagagcact cacttttgga tgctgtgaag ctttgtgtct tctttccact gccttcccag 3120

tttgcatttg gagtttaggt tggcactgtg gagtgcctcc actgagcgcc tccgatgagt 3180

ctaggaagag ctgtaccgtt gggatggcca cgatgattct gaccctgctc tcgtcagctt 3240

ggttcccatt ggatctctca gcccatcaag atgctttgat tttggccgga aacttgcttg 3300

cagccagtgc tcctaaatct ctgagaagtt catgggcctc tgaagaagaa gccaacccag 3360

cagccaccaa gcaagaggag gtctggccag ccctagggga ccgggccttg gtgcccatgg 3420

tggagcagct cttctcccac ctgctgaagg tgatcaacat ttgtgcacat gtcctggacg 3480

acgtggctcc tggaccggca ataaaggcag ccttgccttc tctaacaaac ccccttctc 3540

taagtcccat ccgacgaaag gggaaggaga aagaaccagg agaacaagca tctgtaccgt 3600

tgagtcccaa gaaaggcagt gaggccagtg cagcttctag acaatctgat acctcaggtc 3660

ctgttacaac aagtaaatcc tcatcactgg ggagtttcta tcatcttcct tcatacctca 3720

aactgcatga tgtcctgaaa gctacgcacg ctaactacaa ggtcaccttg gatcttcaga 3780

acagcacgga aaaatttgga gggtttcttc gctcagcctt ggacgttctc tctcagattc 3840

tagagctggc cacactgcag gacattggga agtgtgttga ggagatccta ggatacctga 3900

aatcctgctt tagtcgagaa ccaatgatgg caactgtttg tgttcaacaa ttgttgaaga 3960

ctctctttgg gacaaacttg gcctcccagt ttgacggctt atcatccaac cccagcaagt 4020

cacaaggccg agcacagcgc cttggctcct ccagtgtgag gccaggcttg taccactact 4080

gcttcatggc cccgtacacc cacttcaccc aggccctcgc tgacgccagc ttgaggaaca 4140

tggtgcaggc ggagcaggag cacgacacct cgggatggtt tgatgtcctc cagaaagtgt 4200

ctacccagtt gaagacgaac ctcacaagtg tcacaaagaa ccgtgcagat aagaatgcta 4260

ttcataatca cattcgtttg tttgaacctc ttgttataaa agctttaaaa cagtacacga 4320

caacaacatc tgtgcagtta cagaagcagg ttttagattt gctggcgcag ctggttcagt 4380

tacgggttaa ttactgtctt ctggattcag atcaggtgtt tattggcttt gtattgaaac 4440

agttcgaata cattgaagtg ggccagttca gggaatcaga ggcaatcatt ccaaacatct 4500

ttttcttctt ggtattactg tcttatgaac gctatcattc aaaacagatc attggaattc 4560

ctaaaatcat tcagctctgt gatggcatca tggccagtgg aaggaaggct gtgacacacg 4620

ccataccggc tctgcagccc atagtccatg acctttttgt attaagagga acaaataaag 4680

ctgatgcagg aaaagagctt gaaacccaaa aagaagtggt ggtatcaatg ttactgagac 4740

tcatccagta ccatcaggtg ttggagatgt tcattctcgt cctgcagcag tgccacaagg 4800

agaatgaaga caagtggaag cgactgtctc gacagatagc tgacatcatc ctcccaatgt 4860

tagccaaaca gcagatgcac attgactctc atgaagccct tggagtgtta aatacattat 4920

ttgagatttt ggcccttcc tccctccgtc cggtggacat gcttttacgg agtatgttcg 4980

tcactccaaa cacaatggca tctgtgagca ctgttcaact gtggatatca ggaattctgg 5040

ccattttgag ggttctgatt tcccagtcaa ctgaagatat tgttctttct cgtattcagg 5100

agctctcttt ctctccatat ttaatctcct gtccagtaat taataggcta agagatgggg 5160

acagtaattc agcactagaa gaacacagtg aagggaaaca aataaagaat ttgccggaag 5220

aaacattttc aaggtttcta ttacaactgg tgggtattct tttagaagac attgttacaa 5280

aacagctgaa ggtggaaatg agtgagcagc aacatacttt ctattgccaa gaactaggca 5340

ctctgctaat gtgtctgatc cacatcttca agtctggaat gttccggaga atcacagcag 5400

ctgccactag actgttccgc agtgatggct gtggcggcag tttctacacc ctggacagct 5460

tgaatttgcg ggctcgttcc atgatcacca cccacccggc cctggtgctg ctctggtgtc 5520

agatcctgct gcttgtcaac cacaccgact accgctggtg ggcagaagtg cagcagaccc 5580

cgaaaagaca cagtctgtcc agcacaaagt tacttagtcc ccagatgtct ggagaagagg 5640

aggattctga cttggcagcc aaacttggaa tgtgcaatag agaaatagta cgaagagggg 5700

ctctcattct cttctgtgat tatgtctgtc agaacctcca tgactccgag cacttaacgt 5760

ggctcattgt aaatcacatt caagatctga tcagcctttc ccacgagcct ccagtacagg 5820

acttcatcag tgctgttcat cggaactccg ctgccagcgg cctcttcatc caggcaattc 5880

agtctcgttg tgaaaacctt tcaactccaa ccactctgaa gaaaactctt cagtgcttgg 5940

aggggatcca tctcagccag tcgggagctg tgctcacgtt gtatgtggac aggctgctgt 6000

gcaccccttt ccgtgtgctg gctcgcatgg tcgacatcct tgcttgtcgc cgggtagaaa 6060

tgcttctggc tgcaaattta cagagcagca tggcccagtt gccaatggaa gaactcaaca 6120

gaatccagga ataccttcag agcagcgggc tcgctcagag acaccagagg ctctattccc 6180

tgctggacag gtttcgtctc tccaccatgc aagactcact tagtccctct cccccagtct 6240

cttcccaccc gctggacggg gacgggcacg tgtcactgga aacagtgagt ccggacaaag 6300

actggtacat tcatcttgtc aaatcccagt gttggaccag gtcagattct gcgctgctgg 6360

aaggtgcaga gctggtgaat cggattcctg ctgaagatat gagtgccttc atgatgaact 6420

cggagttcaa cctaagcctg ctagctccat gcttaagcct agggatgagt gaaatttctg 6480

gtggccagag gagtccgctt tttgaagcag cccgtgaggt gactctggcc cgcgtgagca 6540

gcaccgtgca gcagctccct gctgtccacc acgtcttcca gtccgacctg cctgcagagc 6600

cggcggccta ctggagcaag ttgaatgatc tatttgggga tgctgcgctg tatcagtccc 6660

tgaccactct ggcccgggcc ctggcacagt acctggtggc ggtctccaaa ctgcccagtc 6720

acttgcacct tcctcctgag aaagagaagg acaccatgaa attcgtggtg gcaacccttg 6780

aggccctgtc ctggcatttg atccatgagc agattccgct gagtctggat ctccaggcag 6840

ggctggactg ctgctgcctg gccctgcagc tgcctggcct ctggagcgtg gtctcctccg 6900

cagagtttgt gacccacgcc tgctccctca tccactgtgt gcacttcatc ctggaggccg 6960

ttgcagtgca gcctggagag cagcttctta gtccagaaag aaggacaaat accccaaaag 7020

ccatcagaga ggaggaggag gaaatagatc ctaacacaca gaatccgaag tatatcaccg 7080

cagcctgtga gatggtggca gaaatggtgg agtctctgca gtcggtgttg gctttgggtc 7140

ataaaaggaa tagtggcgtg ccggcgtttc tcacgtcagt gctcaggaac atcgtcgtca 7200

gcctggcccg cctgcccctt gtcaacagct acacacgtgt gcccccactg gtgtggaagc 7260

ttggatggtc acccaaaccg ggaggggatt ttggcacagc attccctgag atccccgtgg 7320

agttcctcca ggaaaaggaa gtctttaagg agttcatcta ccgcatcaac acgctaggct 7380

ggaccagtcg tactcagttt gaagaaactt gggccactct ccttggtgtc ctggtgacgc 7440

agcccctcgt gatggagcag gaggagagcc caccagaaga agacacagag aggacgcaga 7500

tcaacgtcct ggccgtgcag gccatcacct cactggtgct cagtgcaatg accgtgcctg 7560

tggccggcaa cccagctgtg agctgcttgg agcagcagcc tcggaacaag cctctgaaag 7620

ctctggacac caggtttggg aggaagctga gcattatcag agggattgta gagcaagaga 7680

ttcaagcaat ggtttcaaag agagagaaca tcgccaccca tcatttatac caggcgtggg 7740

atcctgtccc ttctctgtcc ccggctacca caggtgccct catcagccac gagaagctgc 7800

tgctgcagat caaccccgag cgggagctgg ggagcgtgag ctacaaactc ggccaggtgt 7860

ccatacactc tgtgtggctg gggaacagca tcacacccct aagggaggag gaatgggacg 7920

aggaggagga ggaggaggcc gacgcccctg caccttcatc accacccacg tctccagtca 7980

actccaggaa acaccgggct ggagttgaca tccattcctg ttcgcagttt ttactcgagt 8040

tgtacagccg ctggatcctg ccatccaact cagccaggag gaccccggcc atcctgatca 8100

gtgaggtggt tcgatccctt ctggtggtct cagacttgtt cactgagcgc aaccagtttg 8160

agctgatgta tgtgacgctg acagaactgc gaagggtgca tccttcagaa gacgagatcc 8220

tcgctcagta cctggtgccc gccacctgca aggcagctgc cgtccttggg atggacaagg 8280

tcgtggcgga gcctgtcagc cgcctgctgg agagcacact caggagcagc cacctgccca 8340

gcagggtcgg agccctgcac ggcatcctct atgtgctgga gtgcgacctg ctggacgata 8400

ctgccaagca gctcatccca gtcatcagtg actatctcct ctccaacctg aaagggatcg 8460

cccactgcgt gaacattcac agccagcagc acgtactggt catgtgtgcc actgcgtttt 8520

acctgattga gaactatcct ctggacgtag ggccagaatt ttcagcatca ataatacaga 8580

tgtgtggggt gatgctgtcc ggaagtgagg agtccacccc ctctatcatt taccactgtg 8640

ccctcagagg cctggagcgc ctcctgctct ctgagcagct ctcccgcctg gatgcagaat 8700

ccctggtcaa gctgagtgtg gacagagtga acgtgcacag cccgcaccgg gccatggcgg 8760

ctctgggctt gatgctcacc tgcatgtaca caggaaagga gaaagtcagt ccgggtagaa 8820

cttcagaccc taatcctgca gccccagaca gcgagtcggt gattgttgct atggagcggg 8880

tgtctgttct ttttgatagg atcaggaaag gctttccttg tgaagccaga gtggtggcga 8940

ggatcctgcc ccagtttcta gatgacttct tcccacccca ggacatcatg aacaaagtca 9000

tcggagagtt tctgtccaac cagcagccat acccccagtt catggccacg gtggtgtata 9060

aggtgtttca gactctgcac agcaccgggc agtcatccat ggtccgggac tgggtcatgc 9120

tgtccctctc caacttcacg cagaggaccc cagtcgccat ggccacatgg agcctctcct 9180

gcttcttcgt cagcgcgtcc accagcccat gggttgcggc gatcctccca catgtcatca 9240

gcaggatggg aaagctggag caggtggacg tcaacctttt ctgcctggtt gccacagact 9300

tttacagaca ccagatagag gaggagctcg accgcagggc cttccagtct gtgtttgagg 9360

tggttgcagc tccaggaagc ccatatcacc ggctgctgac ttgtttacga aatgtccaca 9420

aggtcaccac ctgctgagcg ccatggtggg agagactgtg aggcggcagc tggggctgga 9480

gcctccagaa atctgcgccc tgtgccctgc ctccaccgag ccagcttggt ccctgtgggc 9540

ttccgcacat gccgcgggcg gccaggcaac gtgcgtgtct ctgccatatg gcagaagtgc 9600

tctttgtggt acagtggcca ggcaaggagt atctgcagtc ccggtggggc tgagcctgag 9660

gccttccgga gagcaggagc agctgtgctg cacgccatgt gggtgaccag gtcctttctc 9720

ctgatgctca cctgttgggt gttgccaggc tgcagctgct cttgcatctg ggccggaagt 9780

cctccctcct gcaggctggc tgtgggcccc tctgctgtcc tgcagtagaa ggtgccgtga 9840

gcaggctttg ggaacactgg cctgtgtctt cctggtgggg tgtgcatgcc acgccctgtg 9900

tctgtatgca cagatgccat ggcatgtgct gggccagtgg ctgggggtgc tagacaccca 9960

gcaccattct cccttctctc ttttcttctc aggatttaaa atttaattat atcagtaaag 10020

agattaattt taacgtaact ctttctatgc ccgtgtaaag tatgtgaatt gcaaggcctg 10080

tgctgcatgc gacagtgttc ggggaggtgg gcagggcccc tggccacgct ccctctcctg 10140

tagccactgg catagccttc ctgagcaccc gctgacattt ccgttgtaca tgttcctgtt 10200

tatgcattca caaggtgact gggatgtaga gaggcgctag tgtgcaggtg gccacagcag 10260

gactaaggac aggcccccac tgtcctaggg gcatgctcgc ctgcagcccc tccttcttgg 10320

gcacagacaa ctgttgttct ccacccacat tagggacagc agcctcccta tcagctgaga 10380

aggccagccc tccctggctg tgagcagcct ccgctgtgtc cagagacatg ggcctcccac 10440

tcctgttcct tgctagccct ggggcggtgt ctgcccagga gctggctggc cggtgttggg 10500

atctgccgtt ccatggatgc atgccccaag ggtgtcactg agctgtgttt tgtctgagcc 10560

tctcttggtc aacagcaaag cttggcgtct tggcactgtt agtgacagag cctggcatcc 10620

cttctgcccc cgttccagct gacatcttgc acggggaccc cttttagtca ggagagtgca 10680

gatctgtgct cattggagac tgccccactg ccctgtcaga gccgccactc ctatccccag 10740

gccaggtccc tggaccagcc tcttgtttgc aggcccagag gagccaagtc attaaaatgg 10800

aagtggattc tggatggccg gctgctgctg acataggagc tggatttggg agctctgaga 10860

tggggcagga gctctgcttc ctcagccctt gaggcgagcc aggcgaggtt ggcgactgtc 10920

atgtggcttg gtttgctcat gcctgttgat gttttgggta ttgaatatgg taagtggagg 10980

aaatgctttt ctggagtctg tgcaggtgct gccttgagac cctcaagctt ccacctgtcc 11040

ctctcctatg tggcagctga ggagcagctg acatgtggac ttgtgtgctg cccacataca 11100

tgaggggggcg ctgaaaggga gcccctgctc aaagggagcc cctcctctga gcagcctttg 11160

acaggcctgt atgaggcttt tcccaccagc tcccaacaga ggcctccccc agccaggacc 11220

acctcgtcct cgtggcaggg cagcaggagc ggtagaaagg ggtctgatgt ttgaggaggc 11280

ccttaaggga agctactgaa ttttaacaag aaaaccaccg ttcttccgta ttggttgggg 11340

gctcctgttt ctcatcctag cttcttcctg gaaagcctgc tagaagcttt gggaatgagg 11400

ggaaagttct cagaaccgtt gctgctcccc acccacctcc cctgcagtaa gttatgtcaa 11460

cagctcggag acagaagtat cacaggccag atgttgttct gctagatgtt tacatttgta 11520

agaaataaca ctgtgaatgt aaaacggagc cattcccctt ggaatgcata tcgctgggct 11580

caacacagag tttgtcttcc ttttgtttac gacgtgatct aaaacagtcc ttagcaaggg 11640

gctcagaaca ccccgctctg gcagtgggtg tcccccactc ccaaaggcct gcctgtgtgc 11700

tccagagatg aatatgagct cattagtaaa atgactttac ccatgcgtaa gtcaagtaca 11760

cgtgcacgtg catatggaca catctgtagt tttatacacg cacatctcaa gacagagatg 11820

catggcctcc aagagtgccc gtgtcggttc ttcctggaag ttgactttcc tcagacctgc 11880

caggtaaagt tagctgtgtg acgggcgtcc aggcgcgggg cttggtcaga gcagggctca 11940

ttcatggctc actaggatcc caccggagaa aacggtctcc atatcaactc tgccgaaggg 12000

aggaagactt tgtcgcgttc ctaaaaaacc tatggcaagc accaatcata ttatccaaat 12060

tttgttgaaa atgtgattaa tttggttgtc aagttttggg ggtgagctgt ggggagactg 12120

cttttgtttt gctgctggta atatcaggaa agactttaat gaaaccaggg tagaattgtt 12180

tggcaatgca ctgaagcgcg tttctttccc aaaacgtgcc tcccttccgc tgcgggccca 12240

gctgagtctg tgtaggtgac gtttccggct gccaagcgct ctttgttact gtccaccccc 12300

atttctgcca gcacacgtgt cctttcagga ggaaaatgtg aagctgaaac ccctccagac 12360

acccagaatg tagcatctga gaaggccctg tgccctaaag gacacccccg cccccacctt 12420

catggagggg tcattccaga gccctcggag ccgatgaaca gctcgtcctc ttggagctga 12480

gctgagcccc ccacggagct cgggacggat agtaaacagc aataactcgg tctgtggctg 12540

cctggcaggt ggaagttcct ccccctgagg ggcggagtga ggttagttct gtgtgtctgt 12600

ggggtggagt cagcctgctc ctgctacctg tgagcatcct gcccagcaga catcctcacc 12660

cggctttgtc cctccccact tcctccctct gcggggagga cccaggacca cagctgctgg 12720

ccagggtagg cttggagctg tgctccggag gggccacctg agggagcgag aagaaggaag 12780

atcttgagag ctgccgaggc accctggaga gctcaggatg gtccaggcga gaagaggaca 12840

ctcgctcgcc aggcctgggc ctcctgggaa ggagggagcc gctcagagcg ccgcatgaca 12900

actgaaggca acctggaagg ttcagaggcc actcttcccc cgtgtgcctg tcacgctctg 12960

gtgcagtcca aggaacgcct tcccctcagt tgtttccaaa agcagagtct cccgctgcaa 13020

tctgggtggt gattgccagc cttggaggat tgtggccaac gtggacctgc ctacggaggg 13080

tgggctctga cccacgtggg gcctccttgt ccaggtctca ttgctttgcg ctgtggtcag 13140

agggactgtc agctgagcct gagctcccct ggagccagca gggctgtgat gggtgagtcc 13200

cggagcccca cccagacctg actgcttctg agagcaaagg gaaggactga cgagagatgt 13260

atatttaatt tttttaactg ctgcaaacat tgtacatcca aattaaagga aaaacattga 13320

aaccatca 13328

<210> 5
<211> 13447
<212> DNA
<213> Macaca mulatta

<400> 5
gcaaggcgcc gcgggggctg ccgggacggg tccaagatgg acggccgctt cggttccgct 60

tttacccgcg gcccagagcc ccattcattg ccccggtgct gagcggcgct gcgagtcggc 120

ccgaggcctc cggggactgc ctagccgggc gggagaccgc catggcgacc ctggaaaagc 180

tgatgaaggc cttcgagtct ctcaagtcct tccagcagca gcagcagcag cagcagcagc 240

aacagccgcc gccgccgccg ccgccgccgc ctcctcctcc tcagcttcct cagccgccgc 300

aggcacagcc gatgctgcct cagccgcagc cgcccccgcc gccgcccccg ccaccacccg 360

gcccggctgt ggctgaggag ccgctgcacc gaccaaagaa agaactttca gctaccaaga 420

aagaccgtgt gaatcattgt ctgacaatat gtgaaaacat agtggcacag tctgtcagaa 480

attctccaga atttcagaaa cttctgggca tcgctatgga acttttctg ctgtgcagtg 540

atgacgcaga gtcggatgtc agaatggtgg ctgatgaatg cctcaacaaa gttatcaaag 600

ctttgatgga ttctaatctt ccaaggttac agctcgagct ctataaagaa attaaaaaga 660

atggtgcccc tcggagtttg cgtgctgccc tgtggaggtt tgccgagctg gctcacctgg 720

ttcggcctca gaaatgcagg ccttacctgg tgaaccttct gccgtgccta agtcgaacaa 780

gcaagagacc cgaggaatca gtccaggaga ccttggctgc agctgttccc aaaattatgg 840

cttctttcgg caattttgca aatgacaatg aaattaaggt tttgttaaag gccttcatag 900

cgaacctgaa gtcaagctcc cccactattc ggcggacagc tgctggatca gcagtgagca 960

tctgccagca ctcaagaagg acacagtatt tctatagctg gctactaaat gtgctcttag 1020

gcttactggt tcctgtcgag gaggagcact ccaccctgct gattcttggc gtgctgctca 1080

ccctgaggta tttggtgccc ttgctgcagc agcaggtcaa ggatacaagc ctgaaaggca 1140

gcttcggagt gacacggaaa gaaatggagg tctctccttc tgcagagcag cttgtccagg 1200

tttatgaact gacgttacat catacacagc accaagacca caatgttgtg accggagccc 1260

tggagctgtt gcagcagctc ttcagaacgc ctccccccga gcttctgcaa gccctgacca 1320

cagtgggggg cattgggcag cttaccgccg ctaaggagga gtctggtggc cgaagccgta 1380

gtgggagtat tgtggaactt atagctggag ggggttcctc atgcagccct gtcctttcaa 1440

gaaaacaaaa aggcaaagtg ctcttaggag aagaagaagc cttggaggat gactctgaat 1500

cgagatcgga tgtcagcagc tctgcctttg cagcctcagt gaaggatgat atcagtggag 1560

agctggctac ttcttcaggg gtttccactc cagggtcagc aggtcacgac atcatcacgg 1620

agcagccacg gtcacagcac acgctgcagg cggactcagt ggatctggcc agctgtgact 1680

tgacaagctc tgccacggat ggggatgagg aggatatctt gagccacagc tccagccagg 1740

tcagcgccgt cccatctgac cctgccatgg acctgaatga tgggacccag gcctcctcgc 1800

ccatcagcga cagctcccag accaccaccg aagggcctga ttcagctgtc acccccttcag 1860

acagttctga aattgtgtta gacggtaccg acaaccagta tttgggcctg cagattggac 1920

agccccagga tgaagatgag gaagccacag gtgttcttcc tgacgaagcc tcggaggcct 1980

tcaggaactc ttccatggcc cttcaacaag cacatttatt gaaaaacatg agtcacagca 2040

ggcagccttc tgacagcagt gttgataaat ttgtgttgag agatgaagct actgaaccgg 2100

gtgatcaaga aaacaagcct tgccgcatca aaggtgacat tggacagtcc actgatgatg 2160

attctgcacc tcttgtccat tgtgtccgcc ttttatctgc ttcatttttg ctaacagggg 2220

gaaaaaatgt gctggttccg gaccgggatg tgagggtcag cgtgaaggcc ctggccctca 2280

gctgtgtggg agcagctgtg gctctccacc cagaatcttt cttcagcaaa ctctataaag 2340

ttcctcttga caccacagaa taccctgagg aacaatatgt ctcagatatc ttgaactaca 2400

tcgatcatgg agacccacag gttcgaggag ccactgccat tctctgtggg accctcatct 2460

gctccatcct cagcaggtcc cgcttccacg tgggagattg gatgggcgcc attagaaccc 2520

tgacaggaaa cacattttct ttggcggatt gcattccttt gctgcggaaa acactgaagg 2580

acgagtcttc tgtcacttgc aagctggcct gtacagctgt gaggcattgt gtcatgagtc 2640

tctgcagcag cagctacagt gagttaggac tgcagctgat catcgacgtg ctgactctga 2700

ggaacagttc ctattggctg gtgaggacag agcttctgga aacccttgcg gagattgact 2760

tcaggctggt gagctttttg gaggcaaaag cagaaaactt acacagaggg gctcatcatt 2820

atacagggct tttaaagctg caagaacgag tgctcaataa tgttgtcatc catttgcttg 2880

gggatgaaga ccccagggtg cgacatgttg ctgcagcatc attaattagg cttgtcccaa 2940

agctgtttta taaatgtgac caaggacaag ctgacccagt agtggccgtg gcaagagatc 3000

aaagcagtgt ttacctgaaa cttctcatgc atgagacgca gcctccatct catttctccg 3060

tcagcacaat aaccagaata tacagaggct ataacctact gccaagcata acagatgtca 3120

ctatggaaaa taacctttca agagttattg cagcagtttc tcatgaactg atcacatcaa 3180

ccacgagagc actcactttt ggatgctgtg aagctttgtg tcttctttcc actgccttcc 3240

cagtttgcat ttggagttta ggttggcact gtggagtgcc tccactgagc gcctccgatg 3300

agtctaggaa gagctgtacc gttgggatgg ccacgatgat tctgaccctg ctctcgtcag 3360

cttggttccc attggatctc tcagcccatc aagatgcttt gattttggcc ggaaacttgc 3420

ttgcagccag tgctcctaaa tctctgagaa gttcatgggc ctctgaagaa gaagccaacc 3480

cagcagccac caagcaagag gaggtctggc cagccctggg ggaccgggcc ttggtgccca 3540

tggtggagca gctcttctcc cacctgctga aggtgatcaa catttgtgca catgtcctgg 3600

acgacgtggc tcctggaccg gcaataaagg cagccttgcc ttctctaaca aacccccctt 3660

ctctaagtcc catccgacga aaggggaagg agaaagaacc aggagaacaa gcatctgtac 3720

cgttgagtcc caagaaaggc agtgaggcca gtgcagcttc tagacaatct gatacctcag 3780

gtcctgttac aacaagtaaa tcctcatcac tggggagttt ctatcatctt ccttcatacc 3840

tcaaactgca tgatgtcctg aaagctacgc acgctaacta caaggtcacc ttggatcttc 3900

agaacagcac ggaaaaattt ggagggtttc ttcgctcagc cttggacgtt ctctctcaga 3960

ttctagagct ggccacactg caggacattg ggaagtgtgt tgaggagatc ctaggatacc 4020

tgaaatcctg ctttagtcga gaaccaatga tggcaactgt ttgtgttcaa caattgttga 4080

agactctctt tgggacaaac ttggcctccc agtttgacgg cttatcatcc aaccccagca 4140

agtcacaagg ccgagcacag cgccttggct cctccagtgt gaggccaggc ttgtaccact 4200

actgcttcat ggccccgtac acccacttca cccaggccct cgctgacgcc agcctgagga 4260

acatggtgca ggcggagcag gagcacgaca cctcgggatg gtttgatgtc ctccagaaag 4320

tgtctaccca gttgaagacg aacctcacaa gtgtcacaaa gaaccgtgca gataagaatg 4380

ctattcataa tcacattcgt ttgtttgaac ctcttgttat aaaagcttta aaacagtaca 4440

cgacaacaac atctgtgcag ttacagaagc aggttttaga tttgctggcg cagctggttc 4500

agttacgggt taattactgt cttctggatt cagatcaggt gtttattggc tttgtattga 4560

aacagttcga atacattgaa gtgggccagt tcagggaatc agaggcaatc attccaaaca 4620

tctttttctt cttggtatta ctgtcttatg aacgctatca ttcaaaacag atcattggaa 4680

ttcctaaaat cattcagctc tgtgatggca tcatggccag tggaaggaag gctgtgacac 4740

acgccatacc ggctctgcag cccatagtcc atgacctttt tgtattaaga ggaacaaata 4800

aagctgatgc aggaaaagag cttgaaaccc aaaaagaagt ggtggtatca atgttactga 4860

gactcatcca gtaccatcag gtgttggaga tgttcattct cgtcctgcag cagtgccaca 4920

aggagaatga agacaagtgg aagcgactgt ctcgacagat agctgacatc atcctcccaa 4980

tgttagccaa acagcagatg cacattgact ctcatgaagc ccttggagtg ttaaatacat 5040

tatttgagat tttggcccct tcctccctcc gtccggtgga catgctttta cggagtatgt 5100

tcgtcactcc aaacacaatg gcatctgtga gcactgttca actgtggata tcaggaattc 5160

tggccatttt gagggttctg atttcccagt caactgaaga tattgttctt tctcgtattc 5220

aggagctctc tttctctcca tatttaatct cctgtccagt aattaatagg ctaagagatg 5280

gggacagtaa ttcagcacta gaagaacaca gtgaagggaa acaaataaag aatttgccag 5340

aagaaacatt ttcaaggttt ctattacaac tggtgggtat tcttttagaa gacattgtta 5400

caaaacagct gaaggtggaa atgagtgagc agcaacatac tttctattgc caagaactag 5460

gcactctgct aatgtgtctg atccacatct tcaagtctgg aatgttccgg agaatcacag 5520

cagctgccac tagactgttc cgcagtgatg gctgtggcgg cagtttctac accctggaca 5580

gcttgaattt gcgggctcgt tccatgatca ccacccaccc ggccctggtg ctgctctggt 5640

gtcagatcct gctgcttgtc aaccacaccg actaccgctg gtgggcagaa gtgcagcaga 5700

ccccgaaaag acacagtctg tccagcacaa agttacttag tccccagatg tctggagaag 5760

aggaggattc tgacttggca gccaaacttg gagtgtgcaa tagagaaata gtacgaagag 5820

gggctctcat tctcttctgt gattatgtct gtcagaacct ccatgactcc gagcacttaa 5880

cgtggctcat tgtaaatcac attcaagatc tgatcagcct ttcccacgag cctccagtac 5940

aggacttcat cagtgctgtt catcggaact ccgctgccag cggcctcttc atccaggcaa 6000

ttcagtctcg ttgtgaaaac ctttcaactc caaccactct gaagaaaact cttcagtgct 6060

tggaggggat ccatctcagc cagtcgggag ctgtgctcac gttgtatgtg gacaggctgc 6120

tgtgcacccc tttccgtgtg ctggctcgca tggtcgacat ccttgcttgt cgccgggtag 6180

aaatgcttct ggctgcaaat ttacagagca gcatggccca gttgccaatg gaagaactca 6240

acagaatcca ggaatacctt cagagcagcg ggctcgctca gagacaccag aggctctatt 6300

ccctgctgga caggtttcgt ctctccacca tgcaagactc acttagtccc tctcccccag 6360

tctcttccca cccgctggac ggggatgggc acgtgtcact ggaaacagtg agtccggaca 6420

aagactggta cattcatctt gtcaaatccc agtgttggac caggtcagat tctgcactgc 6480

tggaaggtgc agagctggtg aatcggattc ctgctgaaga tatgagtgcc ttcatgatga 6540

actcggagtt caacctaagc ctgctagctc catgcttaag cctagggatg agtgaaattt 6600

ctggtggcca gaagagtccg ctttttgaag cagcctgtga ggtgactctg gcccgcgtga 6660

gcagcaccgt gcagcagctc cctgctgtcc accacgtctt ccagtccgac ctgcctgcag 6720

agccggcggc ctactggagc aagttgaatg atctatttgg ggatgctgcg ctgtatcagt 6780

ccctgaccac tctggcccgg gccctggcac agtacctggt ggcggtctcc aaactgccca 6840

gtcacttgca ccttcctcct gagaaagaga aggacaccat gaaattcgtg gtggcaaccc 6900

ttgaggccct gtcctggcat ttgatccatg agcagattcc gctgagtctg gatctccagg 6960

cagggctgga ctgctgctgc ctggccctgc agctgcctgg cctctggagc gtggtctcct 7020

ccgcagagtt tgtgacccac gcctgctccc tcatccactg tgtgcacttc atcctggagg 7080

ccgttgcagt gcagcctgga gagcagcttc ttagtccaga aagaaggaca aataccccaa 7140

aagtcatcag agaggaggag gaggaaatag atcctaacac acagaatccg aagtatatca 7200

ccgcagcctg tgagatggtg gcagaaatgg tggagtctct gcagtcggtg ttggctttgg 7260

gtcataaaag gaatagtggc gtgccggcgt ttctcacgtc agtgctcagg aacatcgtcg 7320

tcagcctggc ccgcctgccc cttgtcaaca gctacacacg tgtgccccca ctggtgtgga 7380

agcttggatg gtcacccaaa ccgggagggg attttggcac agcattccct gagatccccg 7440

tggagttcct ccaggaaaag gaagtcttta aggagttcat ctaccgcatc aacacgctag 7500

gctggaccag tcgtactcag tttgaagaaa cttgggccac tctccttggt gtcctggtga 7560

cgcagcccct cgtgatggag caggaggaga gcccaccaga agaagacaca gagaggacgc 7620

agatcaacgt cctggccgtg caggccatca cctcactggt gctcagtgca atgaccgtgc 7680

ctgtggccgg caacccagct gtgagctgct tggagcagca gcctcggaac aagcctctga 7740

aagctctgga caccaggttt gggaggaagc tgagcattat cagagggatt gtagagcaag 7800

agattcaagc aatggtttca aagagagaga acatcgccac ccatcattta taccaggcgt 7860

gggatcctgt cccttctctg tccccggcta ccacaggtgc cctcatcagc cacgagaagc 7920

tgctgctgca gatcaacccc gagcgggagc tggggagcgt gagctacaaa ctcggccagg 7980

tgtccataca ctctgtgtgg ctggggaaca gcatcacacc cctaagggag gaggaatggg 8040

acgaggagga ggaggaggag gccgacgccc ctgcaccttc atcaccaccc acgtctccag 8100

tcaactccag gaaacaccgg gctggagttg acatccattc ctgttcgcag tttttactcg 8160

agttgtacag ccgctggatc ctgccatcca actcagccag gaggaccccg gccatcctga 8220

tcagtgaggt ggttcgatcc cttctggtgg tctcagactt gttcactgag cgcaaccagt 8280

ttgagctgat gtatgtgacg ctgacagaac tgcgaagggt gcatccttca gaagacgaga 8340

tcctcgctca gtacctggtg cccgccacct gcaaggcagc tgccgtcctt gggatggaca 8400

aggtcgtggc ggagcctgtc agccgcctgc tggagagcac actcaggagc agccacctgc 8460

ccagcagggt cggagccctg cacggcatcc tctatgtgct ggagtgcgac ctgctggacg 8520

atactgccaa gcagctcatc ccagtcatca gtgactatct cctctccaac ctgaaaggga 8580

tcgcccactg cgtgaacatt cacagccagc agcacgtact ggtcatgtgt gccactgcgt 8640

tttacctgat tgagaactat cctctggacg tagggccaga attttcagca tcaataatac 8700

agatgtgtgg ggtgatgctg tccggaagtg aggagtccac cccctctatc atttaccact 8760

gtgccctcag aggcctggag cgcctcctgc tctctgagca gctctcccgc ctggatgcag 8820

aatccctggt caagctgagt gtggacagag tgaacgtgca cagcccgcac cgggccatgg 8880

cggctctggg cttgatgctc acctgcatgt acacaggaaa ggagaaagtc agtccgggta 8940

gaacttcaga ccctaatcct gcagccccag acagcgagtc ggtgattgtt gctatggagc 9000

gggtgtctgt tctttttgat aggatcagga aaggctttcc ttgtgaagcc agagtggtgg 9060

cgaggatcct gccccagttt ctagacgact tcttcccacc ccaggacatc atgaacaaag 9120

tcatcggaga gtttctgtcc aaccagcagc catacccccа gttcatggcc accgtggtgt 9180

ataaggtgtt tcagactctg cacagcaccg ggcagtcatc catggtccgg gactgggtca 9240

tgctgtccct ctccaacttc acacagagga ccccagtcgc catggccaca tggagcctct 9300

cctgcttctt cgtcagcgcg tccaccagcc catgggttgc ggcgatcctc ccacatgtca 9360

tcagcaggat gggaaagctg gagcaggtgg acgtcaacct tttctgcctg gttgccacag 9420

actttttacag acaccagata gaggaggagc tcgaccgcag ggccttccag tctgtgtttg 9480

aggtggttgc agctccagga agcccatatc accggctgct gacttgttta cgaaatgtcc 9540

acaaggtcac cacctgctga gcgccatggt gggagagact gtgaggcggc agctggggct 9600

ggagcctcca gaaatctgcg ccctgtgccc tgcctccacc gagccagctt ggtccctgtg 9660

ggcttccgca catgccgcgg gcggccaggc aacgtgcgtg tctctgccat atggcagaag 9720

tgctctttgt ggtacagtgg ccaggcaagg agtatctgca gtcccggtgg ggctgagcct 9780

gaggccttcc ggagagcagg agcagctgtg ctgcacgcca tgtgggtgac caggtccttt 9840

ctcctgatgc tcacctgttg ggtgttgcca ggctgcagct gctcttgcat ctgggccgga 9900

agtcctccct cctgcaggct ggctgtgggc ccctctgctg tcctgcagta gaaggtgccg 9960

tgagcaggct ttgggaacac tggcctgtgt cttcctggtg gggtgtgcat gccacgccct 10020

gtgtctgtat gcacagatgc catggcatgt gctgggccag tggctggggg tgctagacac 10080

ccagcaccat tctcccttct ctcttttctt ctcaggattt aaaatttaat tatatcagta 10140

aagagattaa ttttaacgta actctttcta tgcccgtgta aagtatgtga attgcaaggc 10200

ctgtgctgca tgcgacagtg ttcggggagg tgggcagggc ccctggccac gctccctctc 10260

ctgtagccac tggcatagcc ttcctgagca cccgctgaca tttccgttgt acatgttcct 10320

gtttatgcat tcacaaggtg actgggatgt agagaggcgc tagtgtgcag gtggccacag 10380

caggactaag gacaggcccc cactgtccta ggggcatgct cgcctgcagc ccctccttct 10440

tgggcacaga caactgttgt tctccaccca cattagggac agcagcctcc ctatcagctg 10500

agaaggccag ccctccctgg ctgtgagcag cctccgctgt gtccagagac atgggcctcc 10560

cactcctgtt ccttgctagc cctggggcgg tgtctgccca ggagctggct ggccggtgat 10620

gggatctgcc gttccatgga tgcatgcccc aagggtgtca ctgagctgtg ttttgtctga 10680

gcctctcttg gtcaacagca aagcttggcg tcttggcact gttagtgaca gagcctggca 10740

tcccttctgc ccccgttcca gctgacatct tgcacgggga ccccttttag tcaggagagt 10800

gcagatctgt gctcattgga gactgcccca ctgccctgtc agagccgcca ctcctatccc 10860

caggccaggt ccctggacca gcctcttgtt tgcaggccca gaggagccaa gtcattaaaa 10920

tggaagtgga ttctggatgg ccggctgctg ctgacatagg agctggattt gggagctctg 10980

agatggggca ggagctctgc ttcctcagcc cttgaggcga gccaggcgag gttggcgact 11040

gtcatgtggc ttggtttgct catgcctgtt gatgttttgg gtattgaata tggtaagtgg 11100

aggaaatgct tttctggagt ctgtgcaggt gctgccttga gaccctcaag cttccacctg 11160

tccctctcct atgtggcagc tgaggagcag ctgacatgtg gacttgtgtg ctgcccacat 11220

acatgagggg gcgctgaaag ggagcccctg ctcaaaggga gcccctcctc tgagcagcct 11280

ttgacaggcc tgtatgaggc ttttcccacc agctcccaac agaggcctcc cccagccagg 11340

accacctcgt cctcgtggca gggcagcagg agcggtagaa aggggtctga tgtttgagga 11400

ggcccttaag ggaagctact gaattttaac aagaaagcca ccattcttcc gtattggttg 11460

ggggctcctg tttctcatcc tagcttcttc ctggaaagcc tgctagaagc tttgggaatg 11520

aggggaaagt tctcagaacc gttgctgctc cccacccacc tcccctgcag taagttatgt 11580

caacagctcg gagacagaag tatcacaggc cagatgttgt tctgctagat gtttacattt 11640

gtaagaaata acactgtgaa tgtaaaacgg agccattccc cttggaatgc atatcgctgg 11700

gctcaacaca gagtttgtct tccttttgtt tacgacgtga tctaaaacag tccttagcaa 11760

ggggctcaga acaccccgct ctggcagtgg gtgtccccca ctcccaaagg cctgcctgtg 11820

tgctccagag atgaatatga gctcattagt aaaatgactt tacccatgcg taagtcaagt 11880

acacgtgcac gtgcatatgg acacatctgt agttttatac acgcacatct caagacagag 11940

atgcatggcc tccaagagtg cccgtgtcgg ttcttcctgg aagttgactt tcctcagacc 12000

tgccaggtaa agttagctgt gtgacgggcg tccaggcgcg gggcttggtc agagcagggc 12060

tcattcatgg ctcactagga tcccaccgga gaaaacggtc tccatatcaa ctctgccgaa 12120

gggaggaaga ctttgtcgcg ttcctaaaaa acctatggca agcaccaatc atattatcca 12180

aattgtgttg aaaatgtgat taatttggtt gtcaagtttt gggggtgagc tgcggggaga 12240

ctgcttttgt tttgctgctg gtaatatcag gaaagacttt aatgaaacca gggtagaatt 12300

gtttggcaat gcactgaagc gcgtttctgt cccaaaacgt gcctcccttc cgctgcgggc 12360

ccagctgagt ctgtgtaggt gacgtttccg gctgccaagc gctctttgtt actgtccacc 12420

cccatttctg ccagcacacg tgtcctttca ggaggaaaat gtgaagcgga aacccctcca 12480

gacacccaga atgtagcatc tgagaaggcc ctgtgcccta aaggacaccc ccgcccccac 12540

cttcatggag gggtcattcc agagccctcg gagccgatga acagctcgtc ctcttggagc 12600

tgagctgagc cccccacgga gctcgggacg gatagtaaac agcaataact cggtctgtgg 12660

ctgcctggca ggtggaagtt cctccccctg aggggcggag tgaggttagt tctgtgtgtc 12720

tgtggggtgg agtcagcctg ctcctgctac ctgtgagcat cctgcccagc agacatcctc 12780

acccggcttt gtccctcccc acttcctccc tctgcgggga ggacccagga ccacagctgc 12840

tggccagggt aggcttggag ctgtgctccg gaggggccac ctgagggagc gagaagaagg 12900

aagatcttga gagctgccga ggcaccctgg agagctcagg atggtccagg cgagaagagg 12960

acactcgctc gccaggcctg ggcctcctgg gaaggaggga gccgctcaga gcgctgcatg 13020

acaactgaag gcaacctgga aggttcagag gccactcttc ccccgtgtgc ctgtcacgct 13080

ctggtgcagt ccaaggaacg ccttccctca gttgtttcca aaagcagagt ctcccgctgc 13140

aatctgggtg gtgattgcca gccttggagg attgtggcca acgtggacct gcctacggag 13200

ggtgggctct gacccacgtg gggcctcctt gtccaggtct cattgctttg cgctgtggtc 13260

agagggactg tcagctgagc ctgagctccc ctggagccag cagggctgtg atgggcgagt 13320

cccggagccc cacccagacc tgactgcttc tgagagcaaa gggaaggact gacgagagat 13380

gtatatttaa ttttttaac tgctgcaaac attgtacatc caaattaaag gaaaaacatt 13440

gaaacca 13447

<210> 6
<211> 13498
<212> DNA
<213> Homo sapiens

<400> 6
ttttttttt ttttttttga tggtttccat ttttttcctt taatttggat gtacaatgtt 60

tgcagcagtt aaaaaattaa atatacatct ctcgtcagtc cttccctttg ctctcagaag 120

cattcaggtc tgggtggggc tccgggactc gcccatcaca gccctgctgg ctccagggga 180

gctcaagctc agctgacagt ccctctgacc acggtgcaaa gcagtgagac ctggacaagg 240

aggccccact tgggtcagag cccaccctcc gtaggcaggt ccacgttggc cacgatcctc 300

caaggctggc agttaccacc cagattgcag cgggagactc tgctcttaga aacaactgag 360

gggaaggcgt tcctttgact gcaccagagc gtgacaggca catgggggaa gagcggcccc 420

tgaaccttcc aggttgcctt cagttgtcat gcggcattct gagcagctcc ctccttccca 480

ggaggcccag gcccggcaag cgagtgtcct cgtctgagcc atcctgagct ctccaaggtc 540

cctcagcagc tctcaagatc ttccttcttc tcactcctac acgtgacccc tctggaggac 600

agctccaagt ctaccctggc cagcagctgt ggtcccgggt cctccccgca gagggaggaa 660

gcgggggagg gacaaagccc gatgaggatg tctgctggga aggatgctca caggtagcaa 720

gagaagcctg actccaccca ccagacacac agaactaacc tcactccacc ccgcaacggg 780

aggaagttcc acctgccagg cggccacaca ccgagttatt gctgtctact atccgtcccg 840

agctccacgt ggggctcatc tcagctccaa gaggaggagc tgttcattgg ctccgagggc 900

tctgaaatga ccccctccat gaagatgggg gcgaggggtg tcctttaggg cacagggcct 960

tctcagatgc tacattctgg gtgtctggag ggggttcagc ttcacatttt ccccttgaaa 1020

ggacacatgc gctggcagaa atgagggtgg acagtaacaa agagcacttg gcagctggaa 1080

acatcaccta catagactca gctgggcccg cagcggaagg gaggcacatt ttgggaaaga 1140

aacacgcttc agtgcattgc caaacaattc taccctggtt tcattaaaat ctttcccgat 1200

attaccagca ggaaaacaaa agcaatctcc ccacagccca cccccaaaac ttgacaacca 1260

aattaatcac atttgcaaca aaatttggat aatacgatgg gtgcttgcca cagattttta 1320

ggaacatgat aaagtcttcc tcccttctgc agagagctga tatggagacc atcttcgcca 1380

gtgggatcct agtgggcaat gaatgagccc tgccctgacc acgtcccacg cctggatgtc 1440

cgtcacgcgg ctaacttgac ctggcgggtc taaggaaagt caacttccag gaagaaccga 1500

cacgggcact cttagaggcc atgcatctcc gtcttgagag gtgtgtgtgt aaaattatag 1560

atgtgtctat atgcacatgc atggatactt tatgtatatg cgtgggtgaa gtcatttta 1620

ctaatgagct catattcatc tccggagcac acaggcaggt ctttgggggt gggggacacc 1680

tactgccaga gcggggtgtt ctgagcccct tgctaaggac tggtttagat cacgtcgtaa 1740

acaagaggaa gacaaactct atgttgagcc cagcgatatg cattccaagg gaatggctct 1800

gttttacatt cacagtgtta tttcttacaa atgtaaacat ctagccagga acaacatctg 1860

gcctgtgata ctgctgtctc agagctgctg acataacctg cgggggaggc gggaggcggg 1920

tggggagcag ccaacagttc tgagaacttt cccctcgttc ccaaaccttc tagcgggctt 1980

tccaggaaaa agctaggatg agaaacagga gcccccaacc aatacggaat ggtgattttc 2040

ttacgtgtta taattcagta gcttccctta agggcctcct caaacatcgg acccctttct 2100

accgctcctg ctgccccgcc acgaggacga ggtggtcctg gctgggggag gcctctgttg 2160

ggagctggtg ggaaaagcct catacaggcc tggcagaggc tgctcagagg aggggctccc 2220

tttcagctcc ccctcacgta tgtgggcagc atacaagtcc acatctcagc tgctccccag 2280

ctgccacata ggagagggac aggtggaagc ttgggggtct caaggcagca cctgcacaga 2340

gttccaacat ttcctccact taccacattc aatacccaaa acatcgacgg gcatgaccaa 2400

accaagccac atgacagtcg ccaaccttgc ctggctcgcc tctagggctg aggaagcaga 2460

gcccctgcct cgtctcacag ccagtcggca agcagagctc ccaaatccag ctcctacatc 2520

agcagcagcc cggccatcca gaatccactt ccattttaat gacttggctc ctctgggcct 2580

gcaaacagga ggctggtcca gggacctggc ctggggatag gagtggcggc tctgacaggg 2640

ccgtggggca gtctccgatg agcacagatc tgcactctcc tgactaaaag gggtcaccgt 2700

gcaagatgtc agctggaacg ggggcagaag ggatgctggg ctctgtcact aacagtgcca 2760

agacaccaag ctttgctgtt gaccgagaga ggctcagaca aaacacagct cagtgacact 2820

cttagggcat gcatccatgg agcagcaggt cccaacacct gccagccagc tcctaggcag 2880

acgccacccc agggctagca aggaacagga gtgggaggcc catgtctctg gacacagtgg 2940

aggctgctca cagccaggga gggctggcct tctcagctga gtgacaggga ggctgctgtc 3000

cctgactggt gggtggagaa cgacagtcgt ctgtgcccga ggaggagggg ctgcaggtga 3060

gcgcacccct aggataatgg gggcctgtcc tcagtcctgc tgtggccacc tgcccactaa 3120

cgcctctcta catcccagtc accttgtgaa tgcataaaca ggaacatgta caacggaaat 3180

gtcagcgggt gctcaggagg gctatgccag tggctacagg agagggagcg tggccggggg 3240

ccctgtccac caccccggac gctgtcgcat gcagcacagg ccttgcgatt cacatacttt 3300

acacgggcat agaaagagtt acgttaaaat taatctcttt actgatataa ttaaatttta 3360

aatcctgaga agaaaagaga gaagggagaa tggtgccggg tgtctagcac ccccagccac 3420

tggcccagca caggccatgg catctgtgca tccagacacg gggcgtggca tgcacacccc 3480

accagggaga cccaggccag tgttcccaaa gcctgctcac ggcaccttct actgcaggac 3540

agcagagggg ccaacagcca gcctgcagga gggaggactt ctggcccaga tgcaagagca 3600

gctgcaacct ggcaacaacc agcaggtgac tatcaggaga aaggacctgg tcacccacat 3660

ggggtgcagc acagctgctc ctgctttctg gaaggcctca ggctcagccc caccaggact 3720

gcagacactc cctgcctggc cactgccaca aagagcactt ctgccacatg gcagagacac 3780

gcacgttgcc tggccgcccg cggcatgtgc ggaagcccat agggaccaag ctggctcggt 3840

ggaggcaggg cacaagggcg cagacttcca aaggctccgg ccccagctgc cgcctcacag 3900

tctctcccac catggcgctc agcaggtggt gaccttgtgg acatttcgta aacaagtcag 3960

cagccggtga tatgggcttc ctggggctgc aaccacctca agcacagact ggaaggccct 4020

gcggtcgagc tcctcctcta tctggtgtct gtagaagtct gtggcgacca ggcagaaaag 4080

gttcacgtcc acctgctcca gcttgcccat cctgctgatg acatgtggga ggatcgccgc 4140

gacccacggg ctggtggacg cgctgacaaa gaagcaggag aggctccacg tggccatggc 4200

gaccggggcc ctctgcgtga agttggagag ggacagcatg acccagtccc ggaccatgga 4260

cgactgcccg gtgctgtgca gagtctgaaa caccttatac accacggtgg ccatgaactg 4320

ggggtatggc tgctggttgg acagaaactc tccgatgact ttgttcatga tgtcctgggg 4380

tgggaagaag tcgtctagaa actggggcag gatcctggcc accactctgg cttcacaagg 4440

aaagcctttc ctgatcctat caaaaagaac agatacccgc tccatagcaa caatcactga 4500

ctcgctgtcg ggggctgcag gattagggtc tgaagttcta cccggactga ctttctcctt 4560

tcctgtgtac atgcaggtga gcatcaggcc cagagccgcc atggcccggt gcgggctgtg 4620

cacgttcact ctgtccacac tcagcttgac cagcgattct gcatccaggc gggagagctg 4680

ctcagagagc aggaggcgct ccaggcctct gagggcacag tggtaaatga tggagggggt 4740

ggactcctca cttccagaca gcatcacccc acacatctgt attattgatg ctgaaaattc 4800

cggccctacg tccagaggat agttctcaat gaggtaaaac gcagtggcac acatgaccag 4860

tacgtgctgc tggctgtgaa tgttcacgca gtgggcgatc cctttcaggt tggagaggag 4920

atagtcgctg atgaccggga tgagctgctt ggcagtgtcg tccagcaggt cgcactccag 4980

cacatagagg acgccgtgca gggctccaac cctgctgggc aggtggctgc tcctgagcgt 5040

gctctccagc aggcggctga caggctccgc cacggccttg tccatcccaa ggacggcagc 5100

tgccttgcag gtggcaggca ccaggtactg agcgaggatc tcgtcttctg aagggtgcac 5160

ccttcgcagt tctgtcagcg tcacatacat cagctcaaac tggttgcgct cggtgaacaa 5220

gtctgagacc actagaaggg atctgaccac ctcactgatc aggatggccg gggtcctcct 5280

ggctgagctg gacggcagga tccagcggct gtacaactca agcaaaaact gcgaacagga 5340

gtggatgtca actccagccc ggtgtttcct ggagttgact ggagacgtgg gtggtgacga 5400

aggtgcaggg gcgtcggcct cctcctcctc ttcctcgtcc cattcctcct ccctcagggg 5460

tgtgatgctg ttccccagcc acacggagtg tatggacacc tggccgagtt tgtagctcat 5520

gctccccagc tcccgctcgg ggttgatctg tagcagcagc ttctcgtggc tgatgagggc 5580

acctgtagta gccggagaca gagaagggac aggatcccat gcctgatata aatgatgggt 5640

ggcaatattc tctctctttg aaaccattgc ttgaatctct tgctccacaa tccctctgat 5700

aatgctcagc ttcctcccaa acctggtgtc gagagctttc agaggcttgt tccggggctg 5760

ctgctccaag cagcttacag ctgggttgcc ggccacaggc acagtcattg cactgagcac 5820

cagtgaggtg atggcctgca cggccaggac gttgatctgg gtcctctctg tgtcttcttc 5880

tggtgggctc tcctcctgct ccatcacgag gggctgcgtc accaggacac caaggagggt 5940

ggcccaagtt tcttcaaact gagtacgact ggtccagcct agtgtgttga tgcggtagat 6000

gaactcctta aagacttcct tttcctggag gaactccacg gggatctcag ggaatgctgt 6060

gccaaaatcc cctcccggtt tgggtgacca tccaagcttc cacaccagtg ggggcacacg 6120

tgtgtagctg ttgacaaggg gcaggcgggc caggctgatg atgatgttcc ttagcaatgg 6180

cgtgagaaac gccggcacgc cgctattcct tttatgaccc aaggccaaca ccgactgcag 6240

agactccacc atttctgcca ccatctcaca ggctgcagtg atatacttag gattctgtgt 6300

gtttggatct acttcctcct cctcctcgct gatggctttt ggggtatttg tccttctttc 6360

tggactaaga agctgctctc caggctgcac tgcaacggcc tccaggatga agtgcacaca 6420

gtagatgagg gagcaggcgt gggtcacaaa ctctgtggag gagaccacgc tccagaggcc 6480

aggcagctgc agggccaggc agcagcagtc cagccctgcc tggagatcca gactcagcgg 6540

gatctgctca tggatcaaat gccaggacag ggcctcaagg gttgccacca cgaatttcac 6600

aatgtccttc tctttctcag gaggaaggtg caaatgactg ggcagtttgg agaccaccac 6660

caggtactgt gccagggccc gggccagagt gggcagggac tgatacagtg cagcatcccc 6720

aaacagatca ttcaacttgc tccagtaggc cgccggctct gcaggcagct cgggctggaa 6780

gacatgatgg acagcaggga gctgctgcac ggtgccgctc acacgggcca gagtcacctc 6840

acgggctgct tcaaaaaggg cactcttctg gccaccagaa atttcactca tccctaggct 6900

taagcatgga gctagcaggc ttaggttgaa ctccgagttc atcatgaagg cattcatatc 6960

ttcagcagga atccgattca ccagctctgc accttccagc agtgcagaat ctgacctggt 7020

ccaacactgg gatttgacaa gatgaacgta ccagtctttg tccggactca ctgtttccag 7080

tgacacgtgc ccatccccgt ccagcgggtg ggaagagact ggaggagagg gactaagtga 7140

gtcttgcatg gtggagagac gaaacctgtc cagcagggaa tagagccttt ggtgtctctg 7200

agcgagcccg ctgctctgaa ggtattcctg gattctgttg agttcttcca ttggcaactg 7260

ggccatgctg ctctgtaaat ttgcagccag aagcatttct acccggcgac aagcaaggat 7320

gtcgaccatg cgagccagca cacggaaagg ggtgcacaga agcctgtcca catacagcgt 7380

gagcacagct cccgactggc tgagatggat cccctccaag cactgaagag ttttcttcag 7440

catggttgga gttgaaaggt tttcacaacg agactgaatt gcctggatga acaggccgct 7500

ggcagcagag ttccgatgaa cggcactgat gaagtcctgt actggaggct cgtgggaaag 7560

gctgatcaga tcttgaatgt gatttacaat gagccacgtt aagtgctcgg agtcatggag 7620

gttctgacag acataatcac agaagagaat gagagcccct cttcgtacta tttctctatt 7680

gcacattcca agtttggctg ccaagtcaga atcctcctct tctccagaca tctggggact 7740

aagtaacttt gtgctggaca gactgtgtct tttcggggtc tgctgcactt ctgcccacca 7800

gcggtagtcg gtgtggttga caagcagcag tatctgacac cagagcagca ccagggccgg 7860

gtgggtggtg atcatggaac gagcccgcaa gttcaagctg tccagggtgt agaaactgcc 7920

gccacagcca tcactgcgga acagcctagt ggcagctgct gtgattctcc ggaacattcc 7980

agacttgaag atgtggatca gacacattag cagtgtgcct agttcctggc aatagaaagt 8040

atgttgctgc tcactcattt ccaccttcag ctgttttgta acaatgtctt ctaaaagaat 8100

accaaccagt tgtaatagaa accttgaaaa tgtttcttct ggcaaattct ttatttgttt 8160

cccttcactg tgttcttcta gcgttgaagt actgtcccca tctcttaacc tattaattac 8220

tgtacaggag attaaatacg gagagaagga gagctcctga atacgagaaa gaacaatatc 8280

ttcagttgac tgggaaatca gaaccctcaa aatggccaga attcccgata tccacagttg 8340

aacagtgctc acggacgcca ttgtgtttgg agtgacgaac atactccgta aaagcatgtc 8400

taccggacgg agggaggaag gggccaaaat ctcaaataat gtatttaaca ctccaagggc 8460

ttcatgagag tcaatgtgca tctgctgttt ggctaacatt gggaggatga tgtcagctat 8520

ctgtcgagac agtcgcttcc acttgtcttc attctccttg tggcactgct gcaggacaag 8580

aatgaacatc tccaacacct gatggtactg gatgagtctc agtaacattg acaccaccac 8640

ctctttttgg gtttcaagct cttttcctgc atcagcttta tttgttcctc ttaatacaaa 8700

gaggtcgtgg actatgggct gcagagccgg tatggcatgt gtcacagcct tccttccact 8760

ggccatgatg ccatcacaga gctgaatgat tttaggaatt ccaatgatct gttttgaatg 8820

atagcgttca taagatagta ataccaagaa gaaaaagatg tttggaatga ttgcctctga 8880

ttccctgaac tggcccactt caatgtattc aaactgtttc aatacaaagc caataaacac 8940

ctgatctgaa tccagaagac agtaattaac ccgtaactga accagctgcg ccagcaaatc 9000

taaaacctgc ttctgtaact gcacacatgt tgtagtcgtg tactgtttta aagcttttat 9060

aacaagaggt tcaaacaaac gaatgtgatt atgaatagca ttcttatctg cacggttctt 9120

tgtgacactc gtgaggtttg tcttcaactg ggtagacact ttctggagga catcaaacca 9180

tcccgaggtg tcgttctcct gctccgcctg caccatgttc ctcaggctgg cgtcagcgag 9240

ggcctgggtg aagtgggtgt acggggccat gaagcagtag tggtacaagc ctggcctcac 9300

actggaggag ccaaggcgct gtgctcggcc ttgtgacttg ctggggttgg aagataagcc 9360

atcaaactgg gaggccaagt ttgtgccaaa gagagtcttc aacaattgtt gaacacaaac 9420

agttgccatc attggttctc gactaaagca ggatttcagg tatcctagga tctcttcaac 9480

acacttccca atgtcctgca gtgtggccag ctctagtatc tgagaaagaa catccaaggc 9540

tgagcggaga aaccctccaa acttttccgt gctgttctga agatccagcg tgaccttgta 9600

gttagcgtgt gtagctttca ggacatcatg cagtttgagg tatgaaggaa gatgatagaa 9660

actccccagt gatgaggatt tacttgttgt aacaggacct gaggtatcag attgtctaga 9720

agctgcactg gcctcactgc ctttcttggg actcaacggt acagatgctt gttctcctgg 9780

ttctttctcc ttccccttgc gtcggatggg acttagagaa ggggggtttg ttagagaagg 9840

caaggctgcc tttattgcgg gtccaggagc cacgtcatcc aggacgtggg cacaaatgtt 9900

aatcaccttc agcaggtgag agaagagctg ctccaccatg ggcaccaggg cccggtcccc 9960

cagggctggc cagacctcct cttgcttggt ggctgctggg ttggcttctt cttcagaggc 10020

ccatgaactt ctcagagatt tgggagcact ggctgcaagc aagtttccgg ccaaaatcaa 10080

agcatcttga tgggctgaga gatccaatgg gaaccaagct gacgagagca gggtcagaat 10140

cattgtggcc atcccaacgg tacagctctt cctagactca tctgaggcac tcagtggagg 10200

cactccacag tgccaaccta aactccaaat gcaaactggg aaggcagtgg aaagaagaca 10260

caaagcttca cagcatccaa atgtgagtgc tctggtggtt gatgtgatta gttcatgaga 10320

aactgctgca ataactcttg aaaggttatt ttccatagtg acgtctgtta tgcttggtag 10380

taggttatag cctctatata ttctggttat tgtgctgacg gagaaatgag atggaggctg 10440

cgtctcatgc atgagaagtt tcaggtaaac actgctttga tctcttgcca cggccactac 10500

tggatcagct tgtccttggt cacatttata aaacagcttt gggacaagcc taattagtga 10560

tgctgcggca acatgtcgca ccctggggtc ttcatctcca agcaaatgga tgacaacatt 10620

attgagcact cgttcttgca gttttaaaag ccctgtataa tgatgagccc ctctgtgtaa 10680

gttttctgct tttgcctcca aaaagctcac cagcctgaag tcaatctctg caagggtttc 10740

cagaagctct gtcctcacca gccaatagga actgttcctc agagtcagca catcgatgat 10800

cagctgcagt cctaactcac tgtagctgct gctgcagaga ctcatgacac agttcctcac 10860

agctgtacaa gctaacttgc aagtaacaga agactcatcc ttcagtgttt tccgcagcaa 10920

aggaatgcaa tccgccaaag aaaatgtatt tcctgtgagg gttctaatgg tgcccatcca 10980

atctcccacg tggaagcggg acctgctgag gatggagcag atgagggtcc cacagagaat 11040

ggcagtggct cctcgaacct gtgggtctcc atgatcgatg tagttcaaga tgtctgagac 11100

atactgttcc tcagggtatt ccgtggtgtc aagaggaact ttatagagtt tgctgaagaa 11160

agattccggg tggagggcca cagctgctcc cacacagctg agggccaggg ccttcacgct 11220

gaccctcaca tccctgtccg gaaccagcac atttttttccc cctgttagca aaaacgaagc 11280

agataaaagg cggacacaat ggacaagagg tgcagagtca tcatcagtgg actgtccaat 11340

gtcacctttg atgcggcaag gcttgttttc ttgatcaccc ggttcagtag cttcatctct 11400

caacacaaat ttatcaacac tgctgtcaga aggctgcctg cagtgactca tgtttttcaa 11460

taaatgtgcc tgttgaaggg ccatggaaga gttcctgaag gcctccgagg cttcatcagg 11520

aagaatacct gtggcttcct catcttcatc ctggggctgt ccaatctgca ggcccaaata 11580

ctggttgtcg gtaccgtcta acacaatttc agaactgtct gaaggggtaa cagctgaatc 11640

aggcccttcg gtggtggtct gggagctgtc gctgatgggc gacgaggcct gggtcccatc 11700

attcaggtcc atggcagggt cagatgggac ggcgctgacc tggctggagc tgtggctcaa 11760

gatatcctcc tcatccccat cagtggcaga gcttgtcaag tcacagctgg ccagatccac 11820

tgagtccgcc tgcagtgtgt gctgtgaccg tggctgttct gtgatgatgt catgacctgc 11880

tgaccctgga gtggaaaccc ctgaagaagc agccagctct ccactgatct catccttcac 11940

tgaggctgtt aaggcagagc tgctgacatc cgatctcgat tcagagtcat cctccaaggc 12000

ttcttcttct cctaagagca ctttgccttt ttgttttctt gaaaggacag ggctgcatga 12060

ggaaccccct ccagctataa gttccacaat actcccacta cggcttcggc caccagactc 12120

ctccttagca gcggtgagct gcccaatgcc cccgactgcg gtcagggttt gcagaagctc 12180

gggtggaggc gttctgaaga gctgctgcaa cagctccagg gctccggtca caacattgtg 12240

gtcttggtgc tgtgtatgat gtaacgtcag ttcataaacc tggacaagct gctctgcaga 12300

aggagagact tccatttctt tccttgtcac tccgaagctg cctttcaggc ttgtgtcctt 12360

gacctgctgc tgcagcaagg gcaccaaata cctcagggtg agcagcacgc caagaatcag 12420

cagagtggag tgttcatcct cgacaggaac gagtaagcct aagagcacat ttagtagcca 12480

actatagaaa tattgtgtcc ttcttgagtg ctggcagatg ctcactgctg atccagccgc 12540

tgtccgccga atggtggggg agcttgactt caggttcgct atgaaggcct ttaacaaaac 12600

cttaatttca ttgtcatttg caaaattgcc aaaagaagcc ataattttgg gaacagctgc 12660

agccaaggtc tcctggactg attcttcggg tctcttgctt gttcgagtca ggcacggcag 12720

aaggttcacc aggtaaggcc tgcatttctg aggccgaacc aggtgagcca gctcagcaaa 12780

cctccacagg gcagcacgca aactccgagg ggcaccattc tttttaattt ccttatagag 12840

ctcgagctgt aaccttggaa gattagaatc catcaaagct ttgataactt tgttgaggca 12900

ttcgtcagcc accatcctga catctgactc tgcgtcatca ctgcacagca gaaaaagttc 12960

catagcgatg cccagaagtt tctgaaattc tggagaattt ctgacagact gtgccactat 13020

gttttcacat attgtcagac aatgattcac acggtctttc ttggtagctg aaagttcttt 13080

ctttggtcgg tgcagcggct cctcagccac agccgggccg ggtggcggcg ggggcggcgg 13140

cgggggcggc tgcggctgag gcagcagcgg ctgtgcctgc ggcggcggct gaggaagctg 13200

aggaggcggc ggcggcggcg gcggcggtgg cggctgttgc tgctgctgct gctgctgctg 13260

ctgctgctgc tgctgctgct gctgctgctg ctgctgctgc tggaaggact tgagggactc 13320

gaaggccttc atcagctttt ccagggtcgc catggcggtc tcccgcccgg cacggcagtc 13380

cccggaggcc tcgggccgac tcgcggcgcc gctcagcacc ggggcaatga atggggctct 13440

gggccgcagg taaaagcaga acctgagcgg ccgtccatct tggacccgtc ccggcagc 13498

<210> 7
<211> 13237
<212> DNA
<213> Mus musculus

<400> 7
ttttttttt ttttttttaa cagcaacaac aggtggttta atcgcttctt taattcaact 60

gtacaatatc tgcaatttaa aaattttaaa tatacatttc atgtcagtcc ttccttttgg 120

aaatggacag ccaggtctag gctgggctcc ggggcacacc catcacagcc ctcctagttc 180

ccagtgaagc ccatggcata cagcagcaag gcttggacag gagcccccta gaatgcagcc 240

aaatctctgc agataggtct ctgccaccta ttatcttaca cccagcttgc ggcagagggt 300

gtttccagag acacttgagg ggagcagttc cttcgatggc tctagagtgt gacaagcaca 360

catggagggt ggccctgaac cttgatatca tctttagttg tcacactgct cagcattggt 420

tcttctttcc tggaggctcc agacccactg aggaacaatt cttttcccaa ccatgatatc 480

ctgagcccac acccagcatc agcagctcag tgtcttcgac tcccacatac caatccctgg 540

aggacagctt catgcctgtc ctggtagcag ccatgatcct agtgctcaat gctgagggag 600

ggagggaggg acggagggag ggagggaggg agggagggaa ggagggaggg aaggagactg 660

tgtggggaag gatgctcaca ggtggcaagg agaccaattc tgcagcccca caatgggagg 720

caagactcct tgtgacgtgg ctgtgagaca agctattgct gtataaaacc tgtcccatga 780

gccggaagca gagctgcttc actcactcac gggaaggtac ttcctgccag ggaaggcacc 840

tgttaggatt ggtcccttcc ctggcactgc attctacagg gcaggaggtg gttccactcc 900

agttcttccc tcctgaaggg tacatgtgca gacaaaatga gagaaccata aagggcactt 960

ggcagtggct aagtcaccta catgtcaagg gggccatcag tgggagggag ggaggcacat 1020

tttggagaag aaacatgctg aagtgcattg ccaaaagttc taccctggtt ttattaaaat 1080

ctttcctgac agtaccacca tggaaacaga aacaacatcc cacctcctac ccctaaaacc 1140

tcatagtcaa aataactttt gtttttaaat aaagcttgga aatctttaga tttttgagga 1200

atttgataaa aagttttagt ccctcctgca gttagacagg tggggcaatg tctccagtga 1260

gactttaatg agctatggac ttttaaaaat tgagtcccat tctcagatgc tagactcaca 1320

aagctgactg tatgtggcag ttgcaagaaa agtctgcttt cagaaaaaac aggcaggcat 1380

ttttagaggc cttgcatatg tctttgagga ttgtgtgtgt gtttatgtgt gtacacaaat 1440

acatacctgc ctgtacccag gtgcatctct aggttgtggc acccatgagc agacaacaac 1500

tttgtggcag aggctgtcct tgccccatac taagaattgt ttctgatcac actaaacaag 1560

aggccaacta aacttgaggt tgagctcact gatataatcc cctggtgaat ggctctagat 1620

tttatattga gtttccttat gaacatctac catgaggagt aatcaggcct gcaccatgct 1680

catctcagag cggttggacc aacctcagag tgtggcagca gcactgtaag aactttcaca 1740

tggtccccga gcacttctag gcgggaaatt gagggtgaca agaagaagcc ctaaatcagc 1800

aaaggggcat tggtgaattt ctttcattaa aattcagtag cttcccttaa cgtcctcttg 1860

aaagacctaa tccatgtcca ctgttcctgt taccacgcct tggggtggtt tttgccaggg 1920

cagataggag gagagtcagg ccaagtgtga ggctccccac aacctgtgtt tggtagggaa 1980

ccttgcatcc cagcagcaag gctacttgtc atgatggaaa gatagaggga aattcaaggg 2040

tctcaagaaa gcaatccatg gactgaagca cagttagtta atcacaggct gcaagctctt 2100

tcctcctgtg tagcctagaa acatctccaa actattccac tcccctactc tacagctgag 2160

aaatacagat atgacttagc ggaacagcag aaaatctgct tggtcatata gtcaaacagc 2220

aaacagagtt cccaaaccaa gccaggaaat gaaggtagct cattttcatt aacatgacct 2280

ggttactctg ggcttgggct ttgggaagag gtggctctga ccagcatggg aagctgtctg 2340

aggccagagg ctgacctgat tttgaacctt ccctttggtg cctcatcttg tcagctgagt 2400

cctccctggg ctctgacagg cataggtctg tactctactg ggctgacaga aggcaagatg 2460

ggaaggggca aaagaggctc tgggtccatt cttaactgtt gctaggacac caagctttcc 2520

cttgactatg agaaactgag acaaaccaac aaaccatagc tcagagacac ctttggggta 2580

atcaggtcag cacttctcag gtcccaacca tgcagaagat acaaagggac agacagcatc 2640

cacaatggtc agctggtgtg tgggcaggct acagtgcagg tcagccacaa ccagggatga 2700

ggttattggg atagccactt tgggtccagc agatgctgtt tctacccagg ctgagagact 2760

aggagagtgc atcaacacca gggaggagat agcttgacag tcatgcctgg gaaggggaga 2820

ggagggcagc tgccacaggg caagcctctt ataactctaa cagtggaagt cagtttttca 2880

gttcctcagt taggccacag gcaggattct cacacaggca gtcaatacca acacctctct 2940

ctgtgctggc ttaatggaat gcataagaaa agggagctgt atgaagtgca agtgccacag 3000

ggtgttggga gggctacagg agggacctgc ccgactagac tgagtagcta caggagaggg 3060

agtggcggcc agaaggcccc tccacttcca taaactttgt cacatgcagc acaggccttg 3120

ccaagtcaca cactttacac gggcatagga aaagttacat taaaattaat ctctttactg 3180

atataattaa attttaactc ctgagaagaa aacacagaaa ggaaaatggt gctggacacc 3240

tggcagcccc agttcccagc cccacacacc attcattttg tgtccagaca ctggtgtggc 3300

aggtatgcct actgggtaaa tgtgggaggg agctctccag cccagtggag caggcgggct 3360

cagaaccatc tggcaagagc taggacttct gatccacata ccagggcagc tgcaacctgg 3420

cgactatggc caggggaaca ctaggaaaaa gacaaacacc tggtcaacct agcactgtca 3480

ccagctgcag cgaggccagg acccaggact caggctcaac cccaacatag tgcatgttcc 3540

ctgcatagcc ctcattgcaa agcactcctg ccattgcctg gctgtccact tgacacaagt 3600

ggaagcctgc acggccaagg cagccccagc agaagcttgg agcaggctcc tggaggctca 3660

ggccccagca gctgccttct ttcagccttt tgtcccacag gcactactca gcaggtggtg 3720

accttgtgaa cattttgcaa acaagcaagc agcctgtggt atggacttcc tggtgcagcc 3780

accacctcaa acacagactg gaaagccctg cggtcgaatt cctcctctat ctggtgtctg 3840

tagaagtctg tggcaaccag gcagaaaagg ttcacatcca cctgttccag tttgcccatc 3900

ctgctgatga catgtggaag gatcgcagaa acccatgggc tggtagatgc gctaacaagg 3960

aagcaggaga ggctccacat ggccatggca actggagttc tttgtgtgaa gttggacagg 4020

gacagcatga cccagtcccg gaccatggat gactgcccag cactgtgcag agtctgaaaa 4080

accttgtaaa ctacagtggc catgaactgt gggtatggct gctgattgga caggaactct 4140

ccaatgactt tgttcatgac atcttgaggt ggaaagaagt catctaggaa ctgaggcagg 4200

atccttgcca caaccctggc ttcacaggga aatcccttgc ggatcctatc aaagagaaca 4260

gacactcgct ccatagctac aatcacagac tcgctgtcag gtgtagcagg gctggggtca 4320

gaagctctgc ctggactggc tttttccttt cctgtgtaca tgcaggtgag catcaggcct 4380

agggctgcca tggccctgtg tgggctttgt acattcactc tgtccacact tagcttgacc 4440

aaggactctg tgtctagccg agatagctgc tcagacagca ggagccgctc cagaccccgg 4500

agggcacagt ggtaaatgat ggaggggggtg gactcctcac ttccagacag cattactcca 4560

cacatctgta tcacagatgc tgaaaattct ggtcccacat ccagagggta gttttccatc 4620

aggtagaaag cagtggcaca cattaccagc acatgctgct ggctgtgaat gttcacgcag 4680

tgggctattc ctttgaggtt ggacagcaga tagtcactaa caactggaat gagctgcttt 4740

gcagtgtcat ccaagaggtc acactccaac acatagagga tgccgtgcag ggctccgatc 4800

tggctgggca ggtggctgct cctcagtgtg ctctccagta ggcggctgac tggctctgcc 4860

acagttttgt ccattccaag gacagcagct gccttacagg tggcaggcac caggtactga 4920

atgaggatct catcttctga agggtgcact ctccgtagtt ctgtcagcgt cagatacatc 4980

atttcaaact gggtacgttc ggtgaataag tctgacacta caagaagaga tcgaaccact 5040

tcactgatca ggatgacggg ggtccttctg gctgcactgg atggcaggat ccatcggctg 5100

tacaattcaa gcagaaactg cgaacaggag tgaatatcaa ccccggcacg gtgttttctg 5160

gaattgactg gagacacagg tggtgacgtt ggtgcaggga catcactttc ttcctcttct 5220

tcctcatccc attcctcctc tctcaggggt gtgatgttat ttcccagcca cacggagtgt 5280

atggacacct ggcccagctt gtagctcatg ttgcctggct cccgctctgg gttgatctgc 5340

agcagcagct tgtcatggct gataagagca cctgtagtag ctggtaacag agaagggaca 5400

ggatcccacg cctggtgaga atggtgagtg gcagtattct ctctctggga aaccatctct 5460

tggatttctt gttctacaat ccctctgatc atgctcagct ttcttccaaa tctggtatcg 5520

agagccttca gtggcttgtt ccggggctgt tgctccaagc agcttacagc tggattgcca 5580

gccacaggca cggtcattgc actgagcact agagaggtga tggcctgcac agccaggaca 5640

tggatctggg ttctttctgt gtcttcctct ggtgggctct cttcctgttc catcaccagg 5700

ggctgagtca ccaggacacc aaggagggtg gcccaagttt cttcgaactg ggtacgattg 5760

gtccacccta gggtgttgat gcggtagatg aactccttga ggatctcctt ctcctggagg 5820

aactctacag ggatctcagg aaacactgtg ccaaaatccc ctccaggctt gggtgaccac 5880

ccgagtttcc ataccagagg aggcacacga gtatagctgt taactagggg gagtcgggcc 5940

agactgataa caatgttctt cagcacagct gtgagaaatg aaggcagggt gctgttcctc 6000

ttgtggccca aggccagcac tgactgcagg gattccacca tgtctgccac catctcgcag 6060

gccgaagtga catgactgag gttttgtata tctgagtcta cttcctcctt tctgacagct 6120

cttggagtat gtgacctgct ttcaggaccg agaagctggt ctccaggttg tactgcaatg 6180

gcttccagga tgaatcgcac acaatggatg agggagcagg catgagtcac gtactctggg 6240

gaggacagca ccccccagag gccaggcacc tgtagtgcca ggcagcagca gtctagcccg 6300

gcttggaggt ccagactcag tgggatctgc tcatggatca aatgccatga cagggcctca 6360

actgtcatta ccacaaactt caccgtgtcc ccctccttct caggaggaag gtgcaaatga 6420

gcaggcactt tggagagcac caccaggtac tgtgccaggg cacgggcaag tatggtcaga 6480

gactggtatg atgtggtatc accaagcaga tcattcaact tgttccagta ggccgtgggc 6540

tctataggca ggaagggctg gaagacttga tggacagcag gaagctgctg aacaacactg 6600

gtcacccggt tcagaatcac cccacgggct gcttcaaaga ggggactctt ttggccatta 6660

gcaatctcgc tcatgccaag gcttaaacag ggagccaaaa ggcttaggtt gaactccgag 6720

ctcatcatga agtcattcat atcttcagca gggatacggt tgaccagctc tgcaccttcc 6780

agcagtgcag aatctgatct ggtccaacac tgggatctga caagctggag gtaccagtct 6840

ttgtctggac tcactgtttc cagagatgtg tgcccatccc catccagtgg gtgggaagtg 6900

actgggggca aggggctaag tgagtcctgc acagtagaga gtcggaatct gtccagcagt 6960

gaatagagcc tttggtgtct ttgtgcaagc ccactgttct ggaggtgttc ttggattctg 7020

tttagttcct cctctggcaa ctgggccatg ctgctctgta aatttgcagc caaaagcatt 7080

tctacccggc gacaggccag ggtgtcgacc atgcgagcca gcgcacggaa gggggtgccc 7140

aggagcctgt ccacatatag tgtgagcaca gcaccagact ggctgagatg gatgccttcc 7200

aagcactgaa gtgttttctt cagagtggtt ggcgttgaaa gattttcaca gcgagactga 7260

attgcctgga taaaaagacc actagctgca gaattacgat gaatggcact aataaagtct 7320

tgtactggag gctcatgaga caagctgatc agatcttgaa tgtgattcac aatgagccat 7380

gttaagtgtt ctgagtcatg gagattctga cagacataat cacagaagag aataagggcc 7440

cctcttcgca ctatttctct attgcacatt cccagctgag ctgccgagcc agaatcctcc 7500

tcttcgccag acttctgggg gttaagtgac ttcgtgcagg acagactgtg tctcttgggt 7560

gtctgctgca cctctgccca ccaccggtgg tcagtgtggt tgatgagaag taggatctga 7620

caccagagca gtaccagggc tgggtgcgtg ggcaccatgg atcggacccg tgcattcagg 7680

ctctctagag tatagaagct gccttcacag ccatcactgg tgaagagtct agtggcagct 7740

gctgtgattc tccggaacat tccagatttg aatatgtgga tcagacacat gagcagtgtg 7800

cctagctctt ggcagtagaa cgtatgctgc tgttcactca tgtccacttt gagctgtttt 7860

gtaacgatgt cttctagaag aataccaacc agctgtaaaa gaaaccttga gaatgtatct 7920

tctggcaaac tcttttgttt cccttcgctg cattctccta gtgttacatt accgcctcca 7980

ccccttaacc tgttaatcac tggacaggag agcaagtgtg gagagaagga gagctcctga 8040

atacgacaaa gaacaatgtc ctcggttgac tgggaaatga gaaccctcag aatggcgagg 8100

attccagata tccacagctg cacagtgctt acagatgcca ttgtgcttgg agtgatgaac 8160

atactccgca aaagcatgtc cacaggacgt agggaggaag gagccaaaat ctcaaacaag 8220

gtatttaaca ctccaagggc ttcatgagag tcaatatgca tctgctgctt ggccaacatg 8280

ggcaggatga tgtctgcgac ctgccgagag agccgtttcc acttgtcctc attctccttg 8340

tggcactgct gcaggacaag gatgaacatc tccagcacct gatggtactg gatgagtcgt 8400

aacagcatgg agaccaccac ctccttctgt gtctcaagct ctttccctgc atcagcttta 8460

tttgttcctc gtaacacaaa gaggtcatgg acaatgggct gcagagcagg tatagcatgt 8520

gtaacggcct tccttccact ggccatgatg ccatcacaca gctggatgat tttaggaatt 8580

ccaatgatct gttttgaatg gtagcgctca taagacagta ataccaggaa gaaaaatata 8640

tttggaataa ttgcctctga ttccctgaac tggcccactt caatgtactc aaactgcttc 8700

agcacaaacc cgatgaacac ctggtctgaa tccagtagac agtaattgac ccgtagctga 8760

accagctgtg ccagcaaatc caaaacctgc ttctgcaatt gtacagatgt tgtcgtggtg 8820

tactgcttca atgcttttat aacaagaggc tcaaataacc taatgtgatt atgaatagca 8880

ttcttatctg cacggttctt tgtgacgctt gttaggttcg tcttcaattg ggcagacact 8940

ttctggagta catcaaacca ccccgaggca tcacgctcct gctccgcctg caccatgttc 9000

ctcaggcttg cgtcagccaa ggcctgtgtg aagtgcgtgt atggtgccat gaagcagtag 9060

tgatataagc cgggcctcac acttgaagag ccaaggcgct gagctcggca ctgagacttg 9120

ctggggttgg aagataagcc atcaaactgt gaggctaagt ttgtcccaaa gagagtcttc 9180

aatagctgct gcacacagac agttgccatc attggttctc gactaaagca ggatttcagg 9240

tatccaagga cctcttcaac acactttcca atgtcctgca gtgtcgccag ctctagaatc 9300

tgagaaagga cgtccaaggc agagcgcagg aacccccccaa acttttcagt gctgttctga 9360

agatctaagg tgaccttata gttggcgtga gtggctttca ggacatcatg cagtttgagg 9420

taggagggga gatggtagaa actccccagt gaggatgatt tacttgctgt gacaggtcct 9480

gaggtgtctg attgtcgaga ggctgcactg gcctcaccaa ctttcttggg actcattgga 9540

gtagaagctt gttctccagg ttctttctcc ttccctttcc gtcgaatagg acttagagaa 9600

ggggggtttg ttagagaagg caaggctgcc ttgattgctg gtccaggagt cacatcgtcc 9660

aagacatgag cacagatatt gatcaccttc agcaggtggg agaaaagctg ctccaccaag 9720

ggcactagag tccgatcccc cagagcaggc cagatttcct cctgtctggt ggctgctgag 9780

ttggcttctt cttcagaggt ccatgaactt ctcagagact tgggggcact cgctgctagc 9840

aagtttccag ccaaaatcaa ggcatcctga tgggctgaga gatccagtgg gaaccaagct 9900

gatgaaagca aggtgagaat catggaggcc atcccaacag tgcagctctt cctggactca 9960

tcagaggcac tcagtggggg cactccacag tgccatccta aactccaagt gcaaactgga 10020

aaggctgctg agagaagaca caaggcttca cagcatccaa atgtgagtgc ccgtgttgtt 10080

gacgtaatga gttcatgaga aactgcggca acaactcttg agagattgtt ttccatggtg 10140

acatctgtta tacttggcag taagctatag cctctataga ttctggtgat ggtgctgaca 10200

gaaaagtgtg atggtggctg ggtctcatgc atgaggagct tcaggtagac actgctctga 10260

tccctcgcta cagccacaac tggatcagct tgtccttggt cacacttgta aaacagcttt 10320

gggacaagcc ttgttaatga tgttgcagca acatgtcgaa ccctggggtc ttcatctcca 10380

agcaaataaa tgaccacatt attgagtact cgttcttgta gttttagaaa ccctgtataa 10440

tgatgagccc ctcggtgtaa actttctgct tttgcctcca aaaaactcac gagcctgaag 10500

tcaatctctg ccagagtgtc cagcagttcg gtcctcacca gccagtagga gctgttcttc 10560

agaggcagca tatcaataag cagttgtaat cccaagtcac tgtagctgct gctgcaaaga 10620

ctcaggacac agtgcctcac agctgtacaa gccaacttgc aagtaacaga agattcatcc 10680

ttcaacgttt tctgcagtaa aggaatgcag tccaccagag aaaatgtatt tcctgtcagg 10740

gttctgatgt tgcccagcca gtcaccaaca cggagacggg acctactgag gatggagtag 10800

acaagggtcc cacagagaat ggcagtagct cctcggacct gtgggtctcc atgatcgatg 10860

tagttcaaga tgtcagaaac atactgttcc tcagtacttt ccgtggtatt aagaggtact 10920

ttgtacagtc tgctgaagaa cgactctgga tgaagggcca cagccgcacc aatgcagctg 10980

agggccaggg ccttcacact gactctcacg tctctgtctg gaaccagtgc tttcttttca 11040

ccagttaaca aaaaggaagc agataaaaga cggacacaat gtaccagagg agcagaatca 11100

tcatcattag gctgtcctat gtcacctttg attcggcaag gcttgctttc tggatcactg 11160

gcttcagcaa cctcatctct tgttacatac ttatctatac tgctgtcgga aggctgcctg 11220

ctatggccca ttctttccaa caagtgtgcc tgttgaaggg ccagagaaga gtttctgaaa 11280

acatctgaga cttcaccaga aagaacacct gcagctccct cctcatcgtc ctcctgtggc 11340

tgtcctatct gcatgcctaa atactggcta tcggcaccat ctaacacaat ttcagaactg 11400

tccgaaggag tcacagctga atcaggtcct tcagtggtgg tctgagaact gtcactgatg 11460

ggtgaggagg cctgggtccc atcattcagg tccatggcag ggtcggatgg gacagcactg 11520

aactggctgg agctgtggct caagatgtcc tcctcatccc catcagtagc agcactggtc 11580

aggtcacagc cggacaaatc cacagagtct gcttgaagtg tgtgctggga tctaggctgc 11640

tcagtgatga tgtcgtgacc aacagaacca ggagtggaaa cacctgaaga agcagcgagc 11700

tctccaccaa tctcactctt cacagaggct gcaaaggctg agctgctgac atctgacctg 11760

gactccgagt catcttccaa ggcttcttcc tctcctaaga gcactttgcc tttctgcttt 11820

cttgagagga cagggctgca cgaggaaccc cctccagcta aaagctccac gatgctcccg 11880

ctgcggcctc ggccccgggc ctcttcttga accagagtga gctgcccaag ccctcctggt 11940

gtggtcagtg cttgcaggag ttcaggtgga ggggtacgga agagctgctg caggagctcc 12000

agtgcccctg tcaccacatt gtggtcttgg tgctgagtat gatgcaaagt cagttcataa 12060

acctggacaa gctgctctgt agaaggagag acttccattt ctttccgtgt caccccaaag 12120

ctgcctttta gacttgtgtc cttgacctgc tgctggagca agggcactag acacctcaat 12180

gtgagcaaca caccgaggat caggagagtg gagtgctctt cttccatggg aaccagcaga 12240

cctaggagga cattaaggag ccagttgtag aagtactgtg tcctcctaga atgttggcag 12300

atgctcacgg ctgagccggc tgctgtccgc cgcacggtgg gagagcttga cttcagattt 12360

gctatgaaag ctttcaacag aaccttaatt tcattgtcat ttgcgaaatt gccaaaagaa 12420

gccataattt taggaacagc tgcagccaag gtctcctgaa ctgattcctc cggtcttttg 12480

cttgttcggg tcaggcatgg aagaagattc accaggtaag gcctgcactt ctgaggtcga 12540

accaggtgag ccagctcagc aaacctccac agggcagcac gcaaacttcg aggagcacca 12600

ttctttttaa tttccttata gagttctaac tgtagccttg gaagattaga atccatcaaa 12660

gctttgatga ctttgttgag gcactcatca gccaccattc tgacatctga ctccgcatcg 12720

tcactgcaca gcagaaacag ttccatagcg atgcccaaga gtttctgaaa ttctggagaa 12780

tttctgagag actgtgccac aatgttttca catattgtta gacaatgatt cacacggtct 12840

ttcttggtgg ctgagagttc cttctttggt cggtgcagcg gttcctctgc cggacctggc 12900

agcggcggtg gtggcggcgg cggctgcccc tgaggcggcg gctgaggggg ttgaggcgga 12960

ggcggcggcg gcggtggcgg cggcgcctgc ggcggtggct gctgctgctg ttgctgctga 13020

aacgacttga gcgactcgaa agccttcatc agcttttcca gggttgccat gacggcttcc 13080

tgcccgatgg gacagaccct gaagacttgg agcctactgg cactacgcgg cgccacttag 13140

cagcaaggca atgaatgggg ctctgcgcgg caggcagaag cggaaccaag gcgctcagcc 13200

atcttgggcc cgtcccggca accctcgcgg cgagtgc 13237

<210> 8
<211> 13189

<212> DNA
<213> Rattus norvegicus

<400> 8
aacagcaaca acgggtagtt taattgcttc tttaattcaa atgtacaata tctgcaattt 60

aaaaatttta aatatacatt tcatgtcagt ccttcctctt ggaaatggac ggccaggtct 120

aggctgggct ccggggcata cccatcacag ccctcctagt tcccagtgaa gcccatggca 180

tacagcagca aggcctggac aggagccccc tagaatgcag gcaaatctct gcagataggt 240

gtctgtcacc ttacacccag cttgtggcag agggtgtttc cggacacttg aggggagcag 300

ttccttcgat ggctctaaag tgtgacaagc acacatggag gtggccctga accttcatgt 360

catcttcagt tgtcacactg ctcggcattg gttcttcttt cctggaggct ccagacccac 420

tgaggaacag ttctcttcca aaccgtgata tcctgagccc ccacccagcc tcagcagctc 480

tcagggtctt ctactcccac ataccaatcc ctggaagaca gcttcgtgcc tgtcctggca 540

gcagccatga tcctagtgct caccgttgag ggagggaggg agggagggag gcaggcaggc 600

agtggggaag gatgctcacg agaggcagga ggagactaat tctgcagccc tacaatggga 660

ggcaggactc cttgccaggt ggctgtgagc caagctattg ctgtataaac cctgtcccat 720

gagctgaaag cagagctgcc tcactcacag gaaggtactt cctgccaggg agggcacccg 780

ttagggtcag tgccttccct ggcaccgcag tctacagggc aggaggtggt tccactctag 840

tccttccctc ctgaagggta catgtgcaga caaaatgaga gaatagtaaa gggcacttgg 900

cagtggcaaa gtcacctaat gtcaaggggc catcagtggg agggaggcac attttggaga 960

agaaacatac ttaagtgcat tgccaaatag ttctaccctg gttttactaa aatctttcct 1020

gataatacca gcaggaaaac agaaacaaca tcccacctcc tacccccaaa acctcacagt 1080

caaaattact ttttttttt taaataaagt ttggaaatcc atagattttt gaggaatttg 1140

ataaaaagtt ttagttcttc ctacagttag acaggtgggg caatgtcttc agtgggactt 1200

taatgactat ggacttttaa aaattgagtc ccattctcag atgctagact cacaaagctg 1260

actgtatgtg gcagttacaa gaaaagtctg ctttcaggaa gaatggacag gcatttttag 1320

aggtcttgca tatgtctttg aggtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgcgtgtgt 1380

gcgtgtgtgc ctgtgcccag gtgcatctct aggttgcagc acccatgagc agacaacagc 1440

tttgtagcag aggctgttct tgtcccatac taagagttat ttctgaccac actgaacaag 1500

agaccaacta aactggaagt cactgatata aaccccaggt gaatggctct agattttata 1560

ttctgttttc ttatgaacat ctaccatgag gagtaatcgg taatcaggcc tgcaacatgc 1620

tcatctcaga gctgttggac caactttaga gtgtggcagc agcattgtga gaactttcat 1680

gtggtctcca agcacttcta ggagggatat ctagggtaac aagtagaaac cctaaatcag 1740

caaaggggca ttggtgactt tctttcatta aaattcagta gcttccttta aggtcctctt 1800

gaaagacctg atccatgtcc actgttcctg ttaccatgac accaggatgg gctgggctgg 1860

cttgcagtgg cctttgccag ggcagatagg aatagaatca ggccaagtgt gaggctcccc 1920

acaacctgtg tacctgtgtt tggtagggaa ccttgcatcc cggcagcctt ttaatcatca 1980

tgatgggaaa acagaaggaa attcttaaga aagcagtcca cagactgaag cacagttaat 2040

tagtcatagg ctgcaagctc tttcctcccg tgtagcctag aaacagctcc aaattactcc 2100

tctccccact ctgcagtcga ttggtacaga caggactgag tgggcagcag agagcccgct 2160

cagtcacaca gccagcagag ctcctggacc aagccagggg acgaaggcag cctgtgtcca 2220

gggctcattc tcatcaacat gtcctggcta ctctgggctt gggccttggg aagaggcggc 2280

tctgaccagc agcacgggaa gctgtctgag gccataggct gacctgattt tgaaccttcc 2340

ctttggtgcc tcatcttgtc aggccgagtc ctcccttggc tctgaaaggc ataggtctgt 2400

actgtaaggg ctgacagaag gcaagatggg aaggggcaaa agaggctctg gttccattct 2460

taattgttgc taggacattg agctttccct tgaccaagag aaacggagac aaccaacaag 2520

ccatagctca gagacacctt tggggtgatc gggctagcat tcctcaggtc ccaaccatgc 2580

agaagataca aagggacaga gagcatccac aatggtcagc cggtgtctgg gcaggctaca 2640

gcccaggtca gccacgacca gggatgagat tattgaaata gcctctttgg gtccagcaga 2700

tgctgtctct gcccaggctg agagactagg agagtgcatc aacactagtg agtagacagc 2760

ttgatagtca tgcctggggt aggggtgggg gtctgccgca gggcaagcct ctcttaatcc 2820

taagtggaag tcagtctcat aagctgggcc acaagcagga ttctcacata gggcagttaa 2880

caccaacacc actctgtgct agtcaaatgg aatgcataag aaaaaggagc cgtgtgaagt 2940

gcaagtgcca tagggtgttg ggagggctac atgagggacc tgcccgacta gactgagtag 3000

ctacaggaga gagagtggtg gccagaaggc gcatccactt ccataaactt tgtcacatgc 3060

agcacaggcc ttgccaagtc acacacttta cacgggcata ggaagagtta cattaaaatt 3120

aatctcttta ctgatataat taaattttaa ctcctgagaa gaaaacagag aaagggaaaa 3180

tgatgctgga cacctggcag tcccagttcc cagcccccac accattcact ttgtgtccag 3240

acactggtgt ggcaggtaca cctgctgggt aaatgtggga gggagctctc cagcccagtg 3300

ggacaggggg gctcagaacc atcttacaag agctcggatt ctgttccaca taccagggca 3360

gctgcaacct ggcaactatg gccagggcaa cactaagaaa aagacaaaca cctggtcaac 3420

ctagcactgc caccagctgc agtgatgcca ggacccagga ctcaggctca accccaacat 3480

agtgcatgtt ccctgcatag ctctcattgc aaagcactcc tgccattgcc tggctgtcca 3540

cttgacacaa gtggaagcct gcacgtccaa ggcagcctta gcagaagctt ggtgcaggcc 3600

cctggaggct gtagccacag cagttgcctc ctctcagcct cttgttccac aggtactact 3660

cagcaggcgg tgaccttgtg aacattttgc aaacaagcaa gcagcctgtg gtatggactt 3720

cctggtgctg ccaccacctc aaacacagac tggaaagccc tgcggtcgaa ttcctcctct 3780

atctggtgtc tgtagaagtc tgtggcaacc aggcagaaaa ggttcacatc cacctgctcc 3840

agtttgccca tcctgctgat gacgtgtgga aggattgcag aaacccatgg gctggtagat 3900

gcactgacaa ggaagcagga gaggctccac atggccatgg caactggagt tctttgtgtg 3960

aagttggaca gagacagcat aacccagtcc cggaccatgg atgactgccc agcactgtgc 4020

agagtctgaa aaaccttgta tactacagtg gccatgaact gtgggtatgg ctgctggttg 4080

gacaggaact ctccaatgac tttgttcatg acatcttgag gtggaaagaa gtcatctaga 4140

aactgaggca ggatccttgc cacgaccctg gcttcacagg gaaatccctt gcggatcctg 4200

tcaaagagca cagacactcg ctccatagct acaatcacag actcgctgtc aggggtagca 4260

gggctggggt cagaagctct gcctggactg gctttttcct ttcctgtgta catgcaggta 4320

agcatcaggc ctagggctgc catggccctg tgtgggcttt gtacattcac tctgtccaca 4380

cttagcttga ccaaggactc cgtgtctagc cgagagagct gctcagacag caggagccgt 4440

tccagacccc ggagggcaca gtggtaaatg atggaggggg tggactcctc acttccagac 4500

agcattactc cacacatctg tatcacagat gctgagaatt ctggccccac atccagaggg 4560

tagttttcca tcaggtagaa tgcagtggca cacatcacca gcacatgctg ctggctgtga 4620

atgttcacgc agtgggctat tcctttgagg ttggacagca gatagtcact aacaactgga 4680

atgagctgct ttacagtgtc atccaagagg tcacactcca acacatagag gatgccatgc 4740

agggctccga tctggctggg caggtgggtg ctcctgagtg tgctctccag taggcggctg 4800

accggctctg ccacagtttt gtccattcca agaacagcag ctgccttaca ggtggcaggc 4860

accaggtatt gaatgaggat ctcatcttct gaagggtgca ctctccgtag ttctgtcagc 4920

gtcagataca tcatttcaaa ctgggtacgt tcagtgaata agtctgacac cacaagaaga 4980

gatcgaacca cttcactgat caggatgaca ggggtccttc tggctgcact ggatggcagg 5040

atccaacggc tgtataattc aagcagaaac tgcgaacagg agtgaatatc aaccccagca 5100

cggtgttttc tggaattgac tggagacaca ggtggtgatg ttggcgcagg ggcatccgct 5160

tcttcctcct cctcctcatc ccattcctcc tctctcaggg gtgtgatgtt gttccccagc 5220

cacacggagt gtatggacac ctggcccagc ttgtagctca tgttgcctgg ctcccgctct 5280

gagttgatct gcagcagcag cttgtcatgg ctgataagag cacctgtagt agctggtaac 5340

agagaaggga caggatccca tgcctggtga gaatgatgag tggcagtatt ctctctttgg 5400

gaaaccatct cttggatttc ttgttctaca atccctctga tcatgctcaa ctttcttcca 5460

aatctggtat cgagagcctt cagtggcttg ttccggggct gttgctccaa gcagcttaca 5520

gctggattgc cagccacagg cacagccatt gcgctgagca ctagagaggt gatggcctgt 5580

acagccagga cgtggatctg ggtcctttcg gtgtcttcct ctggtgggct ctcttcctgt 5640

tccatcacca agggctgagt caccaggaca ccaaggaggg tggcccaagt ttcttcgaat 5700

tgagtacgac tggtccaccc tagggtgttg atgcggtaga tgaactcctt gaggacctcc 5760

ttctcctgga ggaactctac agggatctca ggaaacactg tgccgaaatc ccctccaggc 5820

ttgggtgacc acccgagttt ccataccaga ggaggcacac gagtatagct gttaacgagg 5880

gggaggcggg ccagactgac aacaatgttc ttcagcacag ctgtgagaaa tgaaggtagg 5940

gtgctgttcc tcttgtggcc cagggccagc accgactgca gggattccac catgtctgcc 6000

accatctcgc aggccgaagt gatgtgactg aggttttgta tatctgagtc tacttcctcc 6060

tttctgacag cccttggagt atgtgacctg ctttccggac caagaagttg gtctccaggt 6120

tgtactgcaa tggcttccag gatgaatcgc acacagtgga taagggagca agtatgagtc 6180

acgtactctg gggaggacag cacccccag aggccaggca cctgcagtgc caggcagcag 6240

cagtctaggc cggcttggag gtccagactc agtgggatct gctcatggat caaatgccat 6300

gacagggcct caagtgtcat taccacaaac ttcaccgtgt gcccctcctt ctcaggagga 6360

aggtgcaaag gagcaggcac tttggagagc accaccaggt actgtgccag ggcacgggca 6420

agtgtggtca gagactggta tgatgtggta tcaccaaaga gatcattcag cttgctccag 6480

taggctgtgg gttctgtagg caggaaaggc tggaagactt gatggactgc aggcagctgc 6540

tgaaccacat tggtcacccg gtccagagtc accctacgag ccgcttcaaa aaggggactc 6600

ttttggccat tagcaatctc gctcatgcca aggcttaagc agggagccaa aaggcttagg 6660

ttgaactccg agctcatcat gaagtcactc atatcttcag cagggatacg gttcaccagc 6720

tctgcacctt ccagcagtgc agaatctgac ctggtccaac actgggatct gacaagctgg 6780

aggtaccagt ctttgtccgg attcactgtt tccagggatg tgtgcccatc cccatccaga 6840

gggtgggaag tgactggggg caaggggcta agtgagtcct gcacagtaga gagtcggaat 6900

ctgtccagca gtgaatagag cctttggtgt ctttgtgcaa gcccagtgtt ctggaggtgt 6960

tcctggattc tgttcagttc ctcctctggc aactgggcca tgctgctctg taaatttgca 7020

gccaaaagca tttctactcg gcgacaggcc agggtgtcga ccatgcgagc cagcgcacgg 7080

aaaggggtgc ccagtagcct gtccacatac agtgtgagca cagcaccaga ctggctgaga 7140

tggatgcctt ccaagcactg aagtgttttc ttcagagtgg ttggagttga aagattttca 7200

cagcgagact gaattgcctg gataaaaaga ccactagctg cagaattacg atgaatggca 7260

ctaataaagt cttgaactgg aggctcgtgg gacaagctga tcagatcttg aatgtgattc 7320

acaatgagcc atgttaagtg ttctgagtca tggagattct gacagacata atcacagaag 7380

agaataaggg cccctcttcg tactatttct ctattgcaca ttccaagctg agctgctgag 7440

ccagaatcct cttcagcaga tatctggggg tttagtgact tcgtgcagga cagactgtgt 7500

ctcttgggcg tctgctgcac ctcggcccac catcggtggt cagtgtggtt gatgagcagt 7560

aggatctgac accagagcag taccagagct gggtgtgtgg gcaccatggc tcgcacccgt 7620

gcattcaggc tatctagagt atagaagctg ccttcacagc catcactggt gaagagtcta 7680

gtggcagcgg ctgtgattct ccggaacatt ccagatttga atatgtggat cagacacatg 7740

agcagtgtgc cgagctcttg gcaatagaat gtatgctgct gttcactcat gtccactttg 7800

agctgttttg taacaatgtc ttccagaaga ataccaacca gctgtaagag aaaccttgag 7860

aatgtatctt ctggcaaatt ctttacttgt ttcccttcac tgcgttctcc tagtgttgga 7920

ttactgtctc catcccttaa cctgttaatt actggacagg aaattaaata tggagagaag 7980

gagagctcct gaatacgaga aagaacaatg tcttcggttg actgggaaat gagaaccctc 8040

agaatggcta ggattccaga tatccacagc tgcacagtgc ttacagatgc cattgtgctt 8100

ggagtgatga acatactccg caaaagcatg tccacaggac gtagggagga aggagccaaa 8160

atctcaaaca aggtatttaa tactccaagg gcttcatgag agtcaatatg catctgctgc 8220

ttggctaaca tgggcaggat gatgtctgcg acctgccgag agagccgttt ccacttgtcc 8280

tcattctctt tgtggcactg ctgcaggacg aggatgaaca tctctagcac ctgatggtac 8340

tggatgagtc gtaacagcat tgagaccacc acctccttct gggtttcaag ctctttccct 8400

gcatcagctt tatttgttcc tcttaacaca aagaggtcat ggacaatggg ctgcagcgca 8460

ggaatagcat gtgtgacagc cttccttcca ctggccatga tgccatcaca cagctggatg 8520

attttaggaa ttccaatgat ctgttttgaa tggtagcgct cataagataa tagtaccagg 8580

aagaaaaata tatttggaat aattgcctct gattccctga actggcccac ttcaatgtac 8640

tcaaactgct tcagcacaaa cccgatgaac acctgatctg aatccagtag acagtaattg 8700

acccgtagct gaaccagctg tgccagcaaa tccaaaacct gcttctgcag ttgtactgat 8760

gttgtcgtgg tgtactgctt caatgctttt ataacaagag gctcaaataa cctaatgtgg 8820

ttatgaatag cgttcttatc tgcacggttc tttgtgacac ttgtaaggtt cgtcttcaac 8880

tgagcagaca ctttctggag tacatcaaac caccctgagg catcgtgctc ctggtccgcc 8940

tgtaccatgt tcctcaggct ggcatcagcc aaagcctgcg tgaagtgcgt gtatggtgcc 9000

atgaagcagt agtgatataa gccgggcctc acactggaag agccaaggcg ctgtgctcgg 9060

cactgagact tgctggggtt ggaagataag ccatcaaact gtgaggctaa gtttgtccca 9120

aagagagtct tcaatagctg ctgaacacag acagtcgcca tcattggttc tcgactaaag 9180

caggatttca agtatccaag gacctcttca acacactttc caatgtcctg cagtgtcgcc 9240

agctctagaa tctgagaaag gacgtccaag gcagagcgca ggaacccccc aaacttttca 9300

gtgctgttct gaagatctaa ggtgacctta tagttggcgt gagtggcttt caggacatca 9360

tgcagtctga ggtaggaagg gagatggtag aaactcccaa gtgaagatga tttactcgct 9420

gtgacaggtc ctgaggtgtc tgactgtcga gaggctgtac tggcctctcc acctttcttg 9480

ggactcatcg gagtggatgt ttgttctccg ggctctttct ccttcccttt ccgtcgaata 9540

ggacttagag aaggggggtt tgtgagagaa ggcaaagctg ccttgattgc tggtccagga 9600

gtcacgtcat ccaagacatg agcacagata ttgatcacct tcagcaggtg ggagaaaagc 9660

tgctccacca tgggcaccag agtccgatcc cccagggcag gccagatctc ctcctgtctg 9720

gtggctgctg agctgccttc ttcttccgag gcccatgagc ttctcagaga cttgggggca 9780

ctcgctgcta gcaagtttcc agccaaaatc aaggcatcct gatgggctga gagatccagt 9840

gggaaccaag ctgatgaaag caaggtgaga atcatggagg ccatcccaac agtgcagctc 9900

ttcctggact catcagaggc actcagtggg ggcactccac agtgccatcc tagactccaa 9960

gtgcaaactg gaaaggcggc tgaaagaaca cacaaggctt cacagcaccc aaatgtgagt 10020

gcccgtgtag ttgacgtaat gagttcatga gaaactgcgg caacgactct tgagaggttg 10080

ttttccatgg tgacatctgt tacacttggt agtaagctgt agcctctata gattctggtt 10140

atggtgctga cggagaagtg ggatggtggc tgggtctcat gcatgaggag cttcaggtaa 10200

acactacttt gatctcttgc tacagccacg actgggtcag cctgtccttg gtcacactta 10260

taaaacagct ttgggacaag tcttgtcaat gtcgtcgcag caacatgtcg aaccctgggg 10320

tcttcatctc caagcaaata aatgaccaca ttattgagta ctcgttcttg tagttttaga 10380

aaccctgtat aatgatgagc ccctcggtgt aaactttctg cttttgcctc caaaaaactc 10440

accagcctga aatcaatctc tgcaagagtt tccagcagtt cagtcctcac cagccagtag 10500

gagctgttct tcagaggcag catgtcaata agcagttgta atcccaagtc actgtagctg 10560

ctgctgcaaa gactcaggac acagtgcctc acagctgtac aagccaactt gcaagtaaca 10620

gaagattcat ccttcaaagt tttctgcagt aaaggaatgc agtccaccag agaaaatgta 10680

tttcctgtca gggccctgat ggtgcccagc cagtcaccaa cacggagacg ggacctgctg 10740

aggatggagt agacaagggt cccacagaga atggcagtag ctcctcgcac ctgagggtct 10800

ccatgatcga tgtagttcag gatgtcagag acatactgtt cctcagtact ttccatggta 10860

ctgagaggta ctttgtagag tttgctgaag aacgactctg gatgaagggc cacagctgca 10920

ccaatacagc tgagggccag ggccttcaca ctgactctca catctctgtc tggaaccagt 10980

gctttctttt cgccagttaa caaaaaggaa gcggataaaa gacggacaca atgtaccaga 11040

ggagcagaat catcatcatt aggctgtcct atgtcacctt tgattcggca aggcttgctt 11100

tctgggtccc cagcttcagc aacctcatct tttgaaacaa acttatcaac actgctgtca 11160

gaaggctgcc ggctatgacc cattctttcc aacaagtgtg cctgctgaag ggccagagaa 11220

gagtttctga aaacgtctga gacttcacca gaaagaacac ctgcagcttc ctcctcgtct 11280

tcctcctgtg gctgtcctat ctgcacgcct aaatactggc tgtcagcacc atctaagaca 11340

atttcagaac tgtcagaagg agtcacagct gaatcaggtc cttcagtggt ggtctgagaa 11400

ctgtcactga tgggtgagga ggcctgggtc ccatcattca ggtccatggc agggtcggat 11460

ggaacagcac tgaactggct ggagctgtgg ctcaagatgt cttcctcatc tccatcagta 11520

gcagcactgg tcaagtcaca gcctgacaaa tccacagagt ctgcttgaag tgtgtgctgg 11580

gatcgaggct gctcagtgat gatgtcgtga cctacagaac cgggagtgga gacacccgaa 11640

gaagaagcag cgagctctcc accaatctca ctcttcacag aggctgcaaa ggctgagctg 11700

ctgacatctg acctggactc cgagtcatcc tccaaggctt cttcctctcc taagagcact 11760

ttgccttttt gctttcttga gagaacaggg ctgcatgagg aacccctctc agctaaaagc 11820

tccacgatac tcccgctgcg gcctcggccc ccggcttcct ctcgaaccag agtgagctgc 11880

ccgagccctc ctggtgtggt cagtgcttgc agcagctcag gtggaggggt acggaagagc 11940

tgctgcagga gctccaatgc ccctgtcacc acattatggt cttggtgctg tgtgtgatgc 12000

aaagtcagtt cataaacctg gacaagctgc tctgcagaag gagagacttc catttctttc 12060

cgtgttaccc caaagctgcc ctttagactt gtgtccttga cctgctgctg gagcaagggc 12120

actagacacc tcagtgtgag caacacacca aggatcagga gagtggggtg gtcttcctcc 12180

atgggaacca gcaaacctag gagcacattc aggagccagt tgtagaagta ctgtgtcctc 12240

ctagagtgct ggcagatact cactgctgac ccagctgctg tccgccgcac agtgggagag 12300

cttgacttca gatttgctat gaaagctttc aatagaacct taatttcatt gtcattcgcg 12360

aaattgccaa aagaggccat aattttagga acagctgcag ccaaagtctc ctgaactgac 12420

tcctccggtc gtttgcttgt tcgggtcaaa catggaagaa gattcaccag ataaggcctg 12480

cacttctgag gtcgaaccag gtgagccagc tcagcaaacc tccacagagc tgcacgcaaa 12540

cttcgaggag caccattctt tttaatttcc ttatagagtt ctaactgtag ccttggaaga 12600

ttagagtcca tcaaagcttt gatgactttg ttgaggcact catcagccac cattctgacg 12660

tctgactccg catcgtcgct gcacagcaga aacagttcca tagcaatgcc caagagtttc 12720

tgaaattctg gagaatttct gagagactgt gccacaatgt tttcacatat tgttagacag 12780

tgattcacac ggtccttctt ggtggctgag agttccttct ttggtcggtg cagcggctcc 12840

tcggccggac ctggcagcgg cggtggtggc ggcggctgcc cctgaggcgg cggctgaggg 12900

ggttgaggcg gcggcggcgg cggtggtggc ggcgcctgcg gcggcggctg ctgctgctgc 12960

tgttgctgct ggaacgactt gagcgactcg aaagccttca tcagtttttc cagggttgcc 13020

atgacggcct cctgcccgac aggacagacc ctgaaggctt ggagcctatt cgcactacgc 13080

agcgccactt agcagcaagg taatgaatgg ggctctacga ggtagaccga agcggaacca 13140

aagctcccag ccatcttggg cccgtcccgg caaccctcgc ggcgagtgc 13189

<210> 9
<211> 13328
<212> DNA
<213> Macaca fascicularis

<400> 9
tgatggtttc aatgtttttc ctttaatttg gatgtacaat gtttgcagca gttaaaaaaa 60

ttaaatatac atctctcgtc agtccttccc tttgctctca gaagcagtca ggtctgggtg 120

gggctccggg actcacccat cacagccctg ctggctccag gggagctcag gctcagctga 180

cagtccctct gaccacagcg caaagcaatg agacctggac aaggaggccc cacgtgggtc 240

agagcccacc ctccgtaggc aggtccacgt tggccacaat cctccaaggc tggcaatcac 300

cacccagatt gcagcgggag actctgcttt tggaaacaac tgaggggaag gcgttccttg 360

gactgcacca gagcgtgaca ggcacacggg ggaagagtgg cctctgaacc ttccaggttg 420

ccttcagttg tcatgcggcg ctctgagcgg ctccctcctt cccaggaggc ccaggcctgg 480

cgagcgagtg tcctcttctc gcctggacca tcctgagctc tccagggtgc ctcggcagct 540

ctcaagatct tccttcttct cgctccctca ggtggcccct ccggagcaca gctccaagcc 600

taccctggcc agcagctgtg gtcctgggtc ctccccgcag agggaggaag tggggaggga 660

caaagccggg tgaggatgtc tgctgggcag gatgctcaca ggtagcagga gcaggctgac 720

tccaccccac agacacacag aactaacctc actccgcccc tcagggggag gaacttccac 780

ctgccaggca gccacagacc gagttattgc tgtttactat ccgtcccgag ctccgtgggg 840

ggctcagctc agctccaaga ggacgagctg ttcatcggct ccgagggctc tggaatgacc 900

cctccatgaa ggtgggggcg ggggtgtcct ttagggcaca gggccttctc agatgctaca 960

ttctgggtgt ctggaggggt ttcagcttca cattttcctc ctgaaaggac acgtgtgctg 1020

gcagaaatgg gggtggacag taacaaagag cgcttggcag ccggaaacgt cacctacaca 1080

gactcagctg ggcccgcagc ggaagggagg cacgttttgg gaaagaaacg cgcttcagtg 1140

cattgccaaa caattctacc ctggtttcat taaagtcttt cctgatatta ccagcagcaa 1200

aacaaaagca gtctccccac agctcacccc caaaacttga caaccaaatt aatcacattt 1260

tcaacaaaat ttggataata tgattggtgc ttgccatagg ttttttagga acgcgacaaa 1320

gtcttcctcc cttcggcaga gttgatatgg agaccgtttt ctccggtggg atcctagtga 1380

gccatgaatg agccctgctc tgaccaagcc ccgcgcctgg acgcccgtca cacagctaac 1440

tttacctggc aggtctgagg aaagtcaact tccaggaaga accgacacgg gcactcttgg 1500

aggccatgca tctctgtctt gagatgtgcg tgtataaaac tacagatgtg tccatatgca 1560

cgtgcacgtg tacttgactt acgcatgggt aaagtcattt tactaatgag ctcatattca 1620

tctctggagc acacaggcag gcctttggga gtgggggaca cccactgcca gagcggggtg 1680

ttctgagccc cttgctaagg actgttttag atcacgtcgt aaacaaaagg aagacaaact 1740

ctgtgttgag cccagcgata tgcattccaa ggggaatggc tccgttttac attcacagtg 1800

ttatttctta caaatgtaaa catctagcag aacaacatct ggcctgtgat acttctgtct 1860

ccgagctgtt gacataactt actgcagggg aggtgggtgg ggagcagcaa cggttctgag 1920

aactttcccc tcattcccaa agcttctagc aggctttcca ggaagaagct aggatgagaa 1980

acaggagccc ccaaccaata cggaagaacg gtggttttct tgttaaaatt cagtagcttc 2040

ccttaagggc ctcctcaaac atcagacccc tttctaccgc tcctgctgcc ctgccacgag 2100

gacgaggtgg tcctggctgg gggaggcctc tgttgggagc tggtgggaaa agcctcatac 2160

aggcctgtca aaggctgctc agaggagggg ctccctttga gcaggggctc cctttcagcg 2220

ccccctcatg tatgtgggca gcacacaagt ccacatgtca gctgctcctc agctgccaca 2280

taggagaggg acaggtggaa gcttgagggt ctcaaggcag cacctgcaca gactccagaa 2340

aagcatttcc tccacttacc atattcaata cccaaaacat caacaggcat gagcaaacca 2400

agccacatga cagtcgccaa cctcgcctgg ctcgcctcaa gggctgagga agcagagctc 2460

ctgccccatc tcagagctcc caaatccagc tcctatgtca gcagcagccg gccatccaga 2520

atccacttcc attttaatga cttggctcct ctgggcctgc aaacaagagg ctggtccagg 2580

gacctggcct ggggatagga gtggcggctc tgacagggca gtggggcagt ctccaatgag 2640

cacagatctg cactctcctg actaaaaggg gtccccgtgc aagatgtcag ctggaacggg 2700

ggcagaaggg atgccaggct ctgtcactaa cagtgccaag acgccaagct ttgctgttga 2760

ccaagagagg ctcagacaaa acacagctca gtgacaccct tggggcatgc atccatggaa 2820

cggcagatcc caacaccggc cagccagctc ctgggcagac accgccccag ggctagcaag 2880

gaacaggagt gggaggccca tgtctctgga cacagcggag gctgctcaca gccagggagg 2940

gctggccttc tcagctgata gggaggctgc tgtccctaat gtgggtggag aacaacagtt 3000

gtctgtgccc aagaaggagg ggctgcaggc gagcatgccc ctaggacagt gggggcctgt 3060

ccttagtcct gctgtggcca cctgcacact agcgcctctc tacatcccag tcaccttgtg 3120

aatgcataaa caggaacatg tacaacggaa atgtcagcgg gtgctcagga aggctatgcc 3180

agtggctaca ggagagggag cgtggccagg ggccctgccc acctccccga acactgtcgc 3240

atgcagcaca ggccttgcaa ttcacatact ttacacgggc atagaaagag ttacgttaaa 3300

attaatctct ttactgatat aattaaattt taaatcctga gaagaaaaga gagaagggag 3360

aatggtgctg ggtgtctagc acccccagcc actggcccag cacatgccat ggcatctgtg 3420

catacagaca cagggcgtgg catgcacacc ccaccaggaa gacacaggcc agtgttccca 3480

aagcctgctc acggcacctt ctactgcagg acagcagagg ggcccacagc cagcctgcag 3540

gagggaggac ttccggccca gatgcaagag cagctgcagc ctggcaacac ccaacaggtg 3600

agcatcagga gaaaggacct ggtcacccac atggcgtgca gcacagctgc tcctgctctc 3660

cggaaggcct caggctcagc cccaccggga ctgcagatac tccttgcctg gccactgtac 3720

cacaaagagc acttctgcca tatggcagag acacgcacgt tgcctggccg cccgcggcat 3780

gtgcggaagc ccacagggac caagctggct cggtggaggc agggcacagg gcgcagattt 3840

ctggaggctc cagccccagc tgccgcctca cagtctctcc caccatggcg ctcagcaggt 3900

ggtgaccttg tggacatttc gtaaacaagt cagcagccgg tgatatgggc ttcctggagc 3960

tgcaaccacc tcaaacacag actggaaggc cctgcggtcg agctcctcct ctatctggtg 4020

tctgtaaaag tctgtggcaa ccaggcagaa aaggttgacg tccacctgct ccagctttcc 4080

catcctgctg atgacatgtg ggaggatcgc cgcaacccat gggctggtgg acgcgctgac 4140

gaagaagcag gagaggctcc atgtggccat ggcgactggg gtcctctgcg tgaagttgga 4200

gagggacagc atgacccagt cccggaccat ggatgactgc ccggtgctgt gcagagtctg 4260

aaacacctta tacaccaccg tggccatgaa ctgggggtat ggctgctggt tggacagaaa 4320

ctctccgatg actttgttca tgatgtcctg gggtgggaag aagtcatcta gaaactgggg 4380

caggatcctc gccaccactc tggcttcaca aggaaagcct ttcctgatcc tatcaaaaag 4440

aacagacacc cgctccatag caacaatcac cgactcgctg tctggggctg caggattagg 4500

gtctgaagtt ctacccggac tgactttctc ctttcctgtg tacatgcagg tgagcatcaa 4560

gcccagagcc gccatggccc ggtgcgggct gtgcacgttc actctgtcca cactcagctt 4620

gaccagggat tctgcatcca ggcgggagag ctgctcagag agcaggaggc gctccaggcc 4680

tctgagggca cagtggtaaa tgatagaggg ggtggactcc tcacttccgg acagcatcac 4740

cccacacatc tgtattattg atgctgaaaa ttctggccct acgtccagag gatagttctc 4800

aatcaggtaa aacgcagtgg cacacatgac cagtacgtgc tgctggctgt gaatgttcac 4860

gcagtgggcg atccctttca ggttggagag gagatagtca ctgatgactg ggatgagctg 4920

cttggcagta tcgtccagca ggtcgcactc cagcacatag aggatgccgt gcagggctcc 4980

gaccctgctg ggcaggtggc tgctcctgag tgtgctctcc agcaggcggc tgacaggctc 5040

cgccacgacc ttgtccatcc caaggacggc agctgccttg caggtggcgg gcaccaggta 5100

ctgagcgagg atctcgtctt ctgaaggatg cacccttcgc agttctgtca gcgtcacata 5160

catcagctca aactggttgc gctcagtgaa caagtctgag accaccagaa gggatcgaac 5220

cacctcactg atcaggatgg ccggggtcct cctggctgag ttggatggca ggatccagcg 5280

gctgtacaac tcgagtaaaa actgcgaaca ggaatggatg tcaactccag cccggtgttt 5340

cctggagttg actggagacg tgggtggtga tgaaggtgca ggggcgtcgg cctcctcctc 5400

ctcctcctcg tcccattcct cctcccttag gggtgtgatg ctgttcccca gccacacaga 5460

gtgtatggac acctggccga gtttgtagct cacgctcccc agctcccgct cggggttgat 5520

ctgcagcagc agcttctcgt ggctgatgag ggcacctgtg gtagccgggg acagagaagg 5580

gacaggatcc cacgcctggt ataaatgatg ggtggcgatg ttctctctct ttgaaaccat 5640

tgcttgaatc tcttgctcta caatccctct gataatgctc agcttcctcc caaacctggt 5700

gtccagagct ttcagaggct tgttccgagg ctgctgctcc aagcagctca cagctgggtt 5760

gccggccaca ggcacggtca ttgcactgag caccagtgag gtgatggcct gcacggccag 5820

gacgttgatc tgcgtcctct ctgtgtcttc ttctggtggg ctctcctcct gctccatcac 5880

gaggggctgc gtcaccagga caccaaggag agtggcccaa gtttcttcaa actgagtacg 5940

actggtccag cctagcgtgt tgatgcggta gatgaactcc ttaaagactt ccttttcctg 6000

gaggaactcc acggggatct cagggaatgc tgtgccaaaa tcccctcccg gtttgggtga 6060

ccatccaagc ttccacacca gtgggggcac acgtgtgtag ctgttgacaa ggggcaggcg 6120

ggccaggctg acgacgatgt tcctgagcac tgacgtgaga aacgccggca cgccactatt 6180

ccttttatga cccaaagcca acaccgactg cagagactcc accatttctg ccaccatctc 6240

acaggctgcg gtgatatact tcggattctg tgtgttagga tctatttcct cctcctcctc 6300

tctgatggct tttggggtat ttgtccttct ttctggacta agaagctgct ctccaggctg 6360

cactgcaacg gcctccagga tgaagtgcac acagtggatg agggagcagg cgtgggtcac 6420

aaactctgcg gaggagacca cgctccagag gccaggcagc tgcagggcca ggcagcagca 6480

gtccagccct gcctggagat ccagactcag cggaatctgc tcatggatca aatgccagga 6540

cagggcctca agggttgcca ccacgaattt catggtgtcc ttctctttct caggaggaag 6600

gtgcaagtga ctgggcagtt tggagaccgc caccaggtac tgtgccaggg cccgggccag 6660

agtggtcagg gactgataca gcgcagcatc cccaaataga tcattcaact tgctccagta 6720

ggccgccggc tctgcaggca ggtcggactg gaagacgtgg tggacagcag ggagctgctg 6780

cacggtgctg ctcacgcggg ccagagtcac ctcacgggct gcttcaaaaa gcggactcct 6840

ctggccacca gaaatttcac tcatccctag gcttaagcat ggagctagca ggcttaggtt 6900

gaactccgag ttcatcatga aggcactcat atcttcagca ggaatccgat tcaccagctc 6960

tgcaccttcc agcagcgcag aatctgacct ggtccaacac tgggatttga caagatgaat 7020

gtaccagtct ttgtccggac tcactgtttc cagtgacacg tgcccgtccc cgtccagcgg 7080

gtgggaagag actgggggag agggactaag tgagtcttgc atggtggaga gacgaaacct 7140

gtccagcagg gaatagagcc tctggtgtct ctgagcgagc ccgctgctct gaaggtattc 7200

ctggattctg ttgagttctt ccattggcaa ctgggccatg ctgctctgta aatttgcagc 7260

cagaagcatt tctacccggc gacaagcaag gatgtcgacc atgcgagcca gcacacggaa 7320

aggggtgcac agcagcctgt ccacatacaa cgtgagcaca gctcccgact ggctgagatg 7380

gatcccctcc aagcactgaa gagttttctt cagagtggtt ggagttgaaa ggttttcaca 7440

acgagactga attgcctgga tgaagaggcc gctggcagcg gagttccgat gaacagcact 7500

gatgaagtcc tgtactggag gctcgtggga aaggctgatc agatcttgaa tgtgatttac 7560

aatgagccac gttaagtgct cggagtcatg gaggttctga cagacataat cacagaagag 7620

aatgagagcc cctcttcgta ctatttctct attgcacatt ccaagtttgg ctgccaagtc 7680

agaatcctcc tcttctccag acatctgggg actaagtaac tttgtgctgg acagactgtg 7740

tcttttcggg gtctgctgca cttctgccca ccagcggtag tcggtgtggt tgacaagcag 7800

caggatctga caccagagca gcaccagggc cgggtgggtg gtgatcatgg aacgagcccg 7860

caaattcaag ctgtccaggg tgtagaaact gccgccacag ccatcactgc ggaacagtct 7920

agtggcagct gctgtgattc tccggaacat tccagacttg aagatgtgga tcagacacat 7980

tagcagagtg cctagttctt ggcaatagaa agtatgttgc tgctcactca tttccacctt 8040

cagctgtttt gtaacaatgt cttctaaaag aatacccacc agttgtaata gaaaccttga 8100

aaatgtttct tccggcaaat tctttatttg tttcccttca ctgtgttctt ctagtgctga 8160

attactgtcc ccatctctta gcctattaat tactggacag gagattaaat atggagagaa 8220

agagagctcc tgaatacgag aaagaacaat atcttcagtt gactgggaaa tcagaaccct 8280

caaaatggcc agaattcctg atatccacag ttgaacagtg ctcacagatg ccattgtgtt 8340

tggagtgacg aacatactcc gtaaaagcat gtccaccgga cggagggagg aaggggccaa 8400

aatctcaaat aatgtattta acactccaag ggcttcatga gagtcaatgt gcatctgctg 8460

tttggctaac attgggagga tgatgtcagc tatctgtcga gacagtcgct tccacttgtc 8520

ttcattctcc ttgtggcact gctgcaggac gagaatgaac atctccaaca cctgatggta 8580

ctggatgagt ctcagtaaca ttgataccac cacttctttt tgggtttcaa gctcttttcc 8640

tgcatcagct ttatttgttc ctcttaatac aaaaaggtca tggactatgg gctgcagagc 8700

cggtatggcg tgtgtcacag ccttccttcc actggccatg atgccatcac agagctgaat 8760

gattttagga attccaatga tctgttttga atgatagcgt tcataagaca gtaataccaa 8820

gaagaaaaag atgtttggaa tgattgcctc tgattccctg aactggccca cttcaatgta 8880

ttcgaactgt ttcaatacaa agccaataaa cacctgatct gaatccagaa gacagtaatt 8940

aacccgtaac tgaaccagct gcgccagcaa atctaaaacc tgcttctgta actgcacaga 9000

tgttgttgtc gtgtactgtt ttaaagcttt tataacaaga ggttcaaaca aacgaatgtg 9060

attatgaata gcattcttat ctgcacggtt ctttgtgaca cttgtgaggt tcgtcttcaa 9120

ctgggtagac actttctgga ggacatcaaa ccatcccgag gtgtcgtgct cctgctccgc 9180

ctgcaccatg ttcctcaagc tggcgtcagc gagggcctgg gtgaagtggg tgtacggggc 9240

catgaagcag tagtggtaca agcctggcct cacactggag gagccaaggc gctgtgctcg 9300

gccttgtgac ttgctggggt tggatgataa gccgtcaaac tgggaggcca agtttgtccc 9360

aaagagagtc ttcaacaatt gttgaacaca aacagttgcc atcattggtt ctcgactaaa 9420

gcaggatttc aggtatccta ggatctcctc aacacacttc ccaatgtcct gcagtgtggc 9480

cagctctaga atctgagaga gaacgtccaa ggctgagcga agaaaccctc caaatttttc 9540

cgtgctgttc tgaagatcca aggtgacctt gtagttagcg tgcgtagctt tcaggacatc 9600

atgcagtttg aggtatgaag gaagatgata gaaactcccc agtgatgagg atttacttgt 9660

tgtaacagga cctgaggtat cagattgtct agaagctgca ctggcctcac tgcctttctt 9720

gggactcaac ggtacagatg cttgttctcc tggttctttc tccttcccct ttcgtcggat 9780

gggacttaga gaaggggggt ttgttagaga aggcaaggct gcctttattg ccggtccagg 9840

agccacgtcg tccaggacat gtgcacaaat gttgatcacc ttcagcaggt gggagaagag 9900

ctgctccacc atgggcacca aggcccggtc ccctagggct ggccagacct cctcttgctt 9960

ggtggctgct gggttggctt cttcttcaga ggcccatgaa cttctcagag atttaggagc 10020

actggctgca agcaagtttc cggccaaaat caaagcatct tgatgggctg agagatccaa 10080

tgggaaccaa gctgacgaga gcagggtcag aatcatcgtg gccatcccaa cggtacagct 10140

cttcctagac tcatcggagg cgctcagtgg aggcactcca cagtgccaac ctaaactcca 10200

aatgcaaact gggaaggcag tggaaagaag acacaaagct tcacagcatc caaaagtgag 10260

tgctctcgtg gttgatgtga tcagttcatg agaaactgct gcaataactc ttgaaaggtt 10320

attttccata gtgacatctg ttatgcttgg tagtaggtta tagcctctgt atattctggt 10380

tattgtgctg acggagaaat gagatggagg ctgcgtctca tgcatgagaa gtttcaggta 10440

aacactgctt tgatctcttg ccacggccac tactgggtca gcttgtcctt ggtcacattt 10500

ataaaacagc tttgggacaa gcctaattaa tgatgctgca gcaacatgtc gcaccctggg 10560

gtcttcatcc ccaagcaaat ggatgacaac attattgagc actcgttctt gcagctttaa 10620

aagccctgta taatgatgag cccctctgtg taagttttct gcttttgcct ccaaaaagct 10680

caccagcctg aagtcaatct ccgcaagggt ttccagaagc tctgtcctca ccagccaata 10740

ggaactgttc ctcagagtca gcacgtcgat gatcagctgc agtcctaact cactgtagct 10800

gctgctgcag agactcatga cacaatgcct cacagctgta caagccagct tgcaagtgac 10860

agaagactcg tccttcagtg ttttccgcag caaaggaatg caatccgcca aagaaaatgt 10920

gtttcctgtc agggttctaa tggcgcccat ccaatctccc acgtggaagc gggacctgct 10980

gaggatggag cagatgaggg tcccacagag aatggcagtg gctcctcgaa cctgtgggtc 11040

tccatgatcg atgtagttca agatatctga gacatattgt tcctcagggt attctgtggt 11100

gtcaagagga actttataga gtttgctgaa gaaagattct gggtggagag ccacagctgc 11160

tcccacacag ctgagggcca gggccttcac gctgaccctc acatcccggt ccggaaccag 11220

cacatttttt ccccctgtta gcaaaaacga agcagataaa aggcggacac aatggacaag 11280

aggtgcagaa tcatcatcag tggactgtcc gatgtcacct ttgatgcggc aaggcttgtt 11340

ttcttgatca cccggttcag tagcttcatc tctcaacaca aatttatcaa cactgctgtc 11400

agaaggctgc ctgctgtgac tcatgttttt caataaatgt gcttgttgaa gggccatgga 11460

agagttcctg aaggcctccg aggcttcgtc aggaagaaca cctgtggctt cctcatcttc 11520

atcctggggc tgtccaatct gcaggcccaa atactggttg tcggtaccgt ctaacacaat 11580

ttcagaactg tctgaagggg tgacagctga atcaggccct tcggtggtgg tctgggagct 11640

gtcgctgatg ggcgaggagg cctgggtccc atcattcagg tccatggcag ggtcagatgg 11700

gacggcgctg acctggctgg agctgtggct caagatatcc tcctcatccc catccgtggc 11760

agagcttgtc aagtcacagc tggccagatc cactgagtcc gcctgcagcg tgtgctgtga 11820

ccgtggctgc tccgtgatga tgtcgtgacc tgctgaccct ggagtggaaa cccctgaaga 11880

agtagccagc tctccactga tatcatcctt cactgaggct gcaaaggcag agctgctgac 11940

atccgatctc gattcagagt catcctccaa ggcttcttct tctcctaaga gcactttgcc 12000

tttttgtttt cttgaaagga cagggctgca tgaggaaccc cctccagcta taagttccac 12060

aatactccca ctacggcttc ggccaccaga ctcctcctta gcggcggtga gctgcccaat 12120

gccccccact gtggtcaggg cttgcagaag ctcgggggga ggcgttctga agagctgctg 12180

caacagctcc agggctccgg tcacaacatt gtggtcttgg tgctgtgtat gatgtaacgt 12240

cagttcataa acctggacaa gctgctccgc agaaggacag acctccattt ctttccgtgt 12300

cactccgaag ctgcctttca ggcttgtatc cttgacctgc tgctgcagca agggcaccaa 12360

atacctcagg gtgagcagca cgccaagaat cagcagggtg gagtgctcct cctcgacagg 12420

aaccagtaag cctaagagca catttagtag ccagctatag aaatactgtg tccttcttga 12480

gtgctggcag atgctcactg ctgatccagc agctgtccgc cgaatggtgg gggagcttga 12540

cttcaggttc gctatgaagg cctttaacaa aaccttaatt tcattgtcat ttgcaaaatt 12600

gccgaaagaa gccataattt tgggaacagc tgcagccaag gtctcctgga ctgattcctc 12660

gggtctcttg cttgttcgac ttaggcacgg cagaaggttc accaggtaag gcctgcattt 12720

ctgaggccga accaggtgag ccagctcggc aaacctccac agggcagcac gcaaactccg 12780

aggggcacca ttctttttaa tttctttata gagctcgagc tgtaaccttg gaagattaga 12840

atccatcaaa gctttgataa ctttgttgag gcattcatca gccaccattc tgacatccga 12900

ctctgcgtca tcactgcaca gcagaaaaag ttccatagcg atgcccagaa gtttctgaaa 12960

ttctggagaa tttctgacag actgtgccac tatgttttca catattgtca gacaatgatt 13020

cacacggtct ttcttggtag ctgaaagttc tttctttggt cggtgcagcg gctcctcagc 13080

cacagccggg ccgggtggct gctgctgctg ctgctgctgg aaggacttga gagactcgaa 13140

ggccttcatc agcttttcca gggtcgccat ggcggtctcc cgcccggctg ggcagtcccc 13200

ggaggcctcg ggccgactcg cagcgccgct cagcaccggg gcaatgaatg gggctctggg 13260

ccgcgggtaa aagcggaacc gaagcggccg tccatcttgg acccgtcccg gcagcccccg 13320

cggcgcct 13328

<210> 10
<211> 13447
<212> DNA
<213> Macaca mulatta

<400> 10
tggtttcaat gtttttcctt taatttggat gtacaatgtt tgcagcagtt aaaaaaatta 60

aatatacatc tctcgtcagt ccttcccttt gctctcagaa gcagtcaggt ctgggtgggg 120

ctccgggact cgcccatcac agccctgctg gctccagggg agctcaggct cagctgacag 180

tccctctgac cacagcgcaa agcaatgaga cctggacaag gaggccccac gtgggtcaga 240

gcccaccctc cgtaggcagg tccacgttgg ccacaatcct ccaaggctgg caatcaccac 300

ccagattgca gcgggagact ctgcttttgg aaacaactga gggaaggcgt tccttggact 360

gcaccagagc gtgacaggca cacgggggaa gagtggcctc tgaaccttcc aggttgcctt 420

cagttgtcat gcagcgctct gagcggctcc ctccttccca ggaggcccag gcctggcgag 480

cgagtgtcct cttctcgcct ggaccatcct gagctctcca gggtgcctcg gcagctctca 540

agatcttcct tcttctcgct ccctcaggtg gcccctccgg agcacagctc caagcctacc 600

ctggccagca gctgtggtcc tgggtcctcc ccgcagaggg aggaagtggg gagggacaaa 660

gccgggtgag gatgtctgct gggcaggatg ctcacaggta gcaggagcag gctgactcca 720

ccccacagac acacagaact aacctcactc cgcccctcag ggggaggaac ttccacctgc 780

caggcagcca cagaccgagt tattgctgtt tactatccgt cccgagctcc gtgggggggct 840

cagctcagct ccaagaggac gagctgttca tcggctccga gggctctgga atgacccctc 900

catgaaggtg ggggcggggg tgtcctttag ggcacagggc cttctcagat gctacattct 960

gggtgtctgg aggggtttcc gcttcacatt ttcctcctga aaggacacgt gtgctggcag 1020

aaatgggggt ggacagtaac aaagagcgct tggcagccgg aaacgtcacc tacacagact 1080

cagctgggcc cgcagcggaa gggaggcacg ttttgggaca gaaacgcgct tcagtgcatt 1140

gccaaacaat tctaccctgg tttcattaaa gtctttcctg atattaccag cagcaaaaca 1200

aaagcagtct ccccgcagct caccccccaaa acttgacaac caaattaatc acattttcaa 1260

cacaatttgg ataatatgat tggtgcttgc cataggtttt ttaggaacgc gacaaagtct 1320

tcctcccttc ggcagagttg atatggagac cgttttctcc ggtgggatcc tagtgagcca 1380

tgaatgagcc ctgctctgac caagccccgc gcctggacgc ccgtcacaca gctaacttta 1440

cctggcaggt ctgaggaaag tcaacttcca ggaagaaccg acacgggcac tcttggaggc 1500

catgcatctc tgtcttgaga tgtgcgtgta taaaactaca gatgtgtcca tatgcacgtg 1560

cacgtgtact tgacttacgc atgggtaaag tcattttact aatgagctca tattcatctc 1620

tggagcacac aggcaggcct ttgggagtgg gggacaccca ctgccagagc ggggtgttct 1680

gagccccttg ctaaggactg ttttagatca cgtcgtaaac aaaaggaaga caaactctgt 1740

gttgagccca gcgatatgca ttccaagggg aatggctccg ttttacattc acagtgttat 1800

ttcttacaaa tgtaaacatc tagcagaaca acatctggcc tgtgatactt ctgtctccga 1860

gctgttgaca taacttactg caggggaggt gggtggggag cagcaacggt tctgagaact 1920

ttcccctcat tcccaaagct tctagcaggc tttccaggaa gaagctagga tgagaaacag 1980

gagcccccaa ccaatacgga agaatggtgg ctttcttgtt aaaattcagt agcttccctt 2040

aagggcctcc tcaaacatca gacccctttc taccgctcct gctgccctgc cacgaggacg 2100

aggtggtcct ggctgggggа ggcctctgtt gggagctggt gggaaaagcc tcatacaggc 2160

ctgtcaaagg ctgctcagag gaggggctcc ctttgagcag gggctccctt tcagcgcccc 2220

ctcatgtatg tgggcagcac acaagtccac atgtcagctg ctcctcagct gccacatagg 2280

agagggacag gtggaagctt gagggtctca aggcagcacc tgcacagact ccagaaaagc 2340

atttcctcca cttaccatat tcaataccca aaacatcaac aggcatgagc aaaccaagcc 2400

acatgacagt cgccaacctc gcctggctcg cctcaagggc tgaggaagca gagctcctgc 2460

cccatctcag agctcccaaa tccagctcct atgtcagcag cagccggcca tccagaatcc 2520

acttccattt taatgacttg gctcctctgg gcctgcaaac aagaggctgg tccagggacc 2580

tggcctgggg ataggagtgg cggctctgac agggcagtgg ggcagtctcc aatgagcaca 2640

gatctgcact ctcctgacta aaaggggtcc ccgtgcaaga tgtcagctgg aacgggggca 2700

gaagggatgc caggctctgt cactaacagt gccaagacgc caagctttgc tgttgaccaa 2760

gagaggctca gacaaaacac agctcagtga cacccttggg gcatgcatcc atggaacggc 2820

agatcccatc accggccagc cagctcctgg gcagacaccg ccccagggct agcaaggaac 2880

aggagtggga ggcccatgtc tctggacaca gcggaggctg ctcacagcca gggagggctg 2940

gccttctcag ctgataggga ggctgctgtc cctaatgtgg gtggagaaca acagttgtct 3000

gtgcccaaga aggaggggct gcaggcgagc atgcccctag gacagtgggg gcctgtcctt 3060

agtcctgctg tggccacctg cacactagcg cctctctaca tcccagtcac cttgtgaatg 3120

cataaacagg aacatgtaca acggaaatgt cagcgggtgc tcaggaaggc tatgccagtg 3180

gctacaggag agggagcgtg gccaggggcc ctgcccacct ccccgaacac tgtcgcatgc 3240

agcacaggcc ttgcaattca catactttac acgggcatag aaagagttac gttaaaatta 3300

atctctttac tgatataatt aaattttaaa tcctgagaag aaaagagaga agggagaatg 3360

gtgctgggtg tctagcaccc ccagccactg gcccagcaca tgccatggca tctgtgcata 3420

cagacacagg gcgtggcatg cacaccccac caggaagaca caggccagtg ttcccaaagc 3480

ctgctcacgg caccttctac tgcaggacag cagaggggcc cacagccagc ctgcaggagg 3540

gaggacttcc ggcccagatg caagagcagc tgcagcctgg caacacccaa caggtgagca 3600

tcaggagaaa ggacctggtc acccacatgg cgtgcagcac agctgctcct gctctccgga 3660

aggcctcagg ctcagcccca ccgggactgc agatactcct tgcctggcca ctgtaccaca 3720

aagagcactt ctgccatatg gcagagacac gcacgttgcc tggccgcccg cggcatgtgc 3780

ggaagcccac agggaccaag ctggctcggt ggaggcaggg cacagggcgc agatttctgg 3840

aggctccagc cccagctgcc gcctcacagt ctctcccacc atggcgctca gcaggtggtg 3900

accttgtgga catttcgtaa acaagtcagc agccggtgat atgggcttcc tggagctgca 3960

accacctcaa acacagactg gaaggccctg cggtcgagct cctcctctat ctggtgtctg 4020

taaaagtctg tggcaaccag gcagaaaagg ttgacgtcca cctgctccag ctttcccatc 4080

ctgctgatga catgtgggag gatcgccgca acccatgggc tggtggacgc gctgacgaag 4140

aagcaggaga ggctccatgt ggccatggcg actggggtcc tctgtgtgaa gttggagagg 4200

gacagcatga cccagtcccg gaccatggat gactgcccgg tgctgtgcag agtctgaaac 4260

accttataca ccacggtggc catgaactgg gggtatggct gctggttgga cagaaactct 4320

ccgatgactt tgttcatgat gtcctggggt gggaagaagt cgtctagaaa ctggggcagg 4380

atcctcgcca ccactctggc ttcacaagga aagcctttcc tgatcctatc aaaaagaaca 4440

gacacccgct ccatagcaac aatcaccgac tcgctgtctg gggctgcagg attagggtct 4500

gaagttctac ccggactgac tttctccttt cctgtgtaca tgcaggtgag catcaagccc 4560

agagccgcca tggcccggtg cgggctgtgc acgttcactc tgtccacact cagcttgacc 4620

agggattctg catccaggcg ggagagctgc tcagagagca ggaggcgctc caggcctctg 4680

agggcacagt ggtaaatgat agaggggtg gactcctcac ttccggacag catcacccca 4740

cacatctgta ttattgatgc tgaaaattct ggccctacgt ccagaggata gttctcaatc 4800

aggtaaaacg cagtggcaca catgaccagt acgtgctgct ggctgtgaat gttcacgcag 4860

tgggcgatcc ctttcaggtt ggagaggaga tagtcactga tgactgggat gagctgcttg 4920

gcagtatcgt ccagcaggtc gcactccagc acatagagga tgccgtgcag ggctccgacc 4980

ctgctgggca ggtggctgct cctgagtgtg ctctccagca ggcggctgac aggctccgcc 5040

acgaccttgt ccatcccaag gacggcagct gccttgcagg tggcgggcac caggtactga 5100

gcgaggatct cgtcttctga aggatgcacc cttcgcagtt ctgtcagcgt cacatacatc 5160

agctcaaact ggttgcgctc agtgaacaag tctgagacca ccagaaggga tcgaaccacc 5220

tcactgatca ggatggccgg ggtcctcctg gctgagttgg atggcaggat ccagcggctg 5280

tacaactcga gtaaaaactg cgaacaggaa tggatgtcaa ctccagcccg gtgtttcctg 5340

gagttgactg gagacgtggg tggtgatgaa ggtgcagggg cgtcggcctc ctcctcctcc 5400

tcctcgtccc attcctcctc ccttaggggt gtgatgctgt tccccagcca cacagagtgt 5460

atggacacct ggccgagttt gtagctcacg ctccccagct cccgctcggg gttgatctgc 5520

agcagcagct tctcgtggct gatgagggca cctgtggtag ccggggacag agaagggaca 5580

ggatcccacg cctggtataa atgatgggtg gcgatgttct ctctctttga aaccattgct 5640

tgaatctctt gctctacaat ccctctgata atgctcagct tcctcccaaa cctggtgtcc 5700

agagctttca gaggcttgtt ccgaggctgc tgctccaagc agctcacagc tgggttgccg 5760

gccacaggca cggtcattgc actgagcacc agtgaggtga tggcctgcac ggccaggacg 5820

ttgatctgcg tcctctctgt gtcttcttct ggtgggctct cctcctgctc catcacgagg 5880

ggctgcgtca ccaggacacc aaggagagtg gcccaagttt cttcaaactg agtacgactg 5940

gtccagccta gcgtgttgat gcggtagatg aactccttaa agacttcctt ttcctggagg 6000

aactccacgg ggatctcagg gaatgctgtg ccaaaatccc ctcccggttt gggtgaccat 6060

ccaagcttcc acaccagtgg gggcacacgt gtgtagctgt tgacaagggg caggcgggcc 6120

aggctgacga cgatgttcct gagcactgac gtgagaaacg ccggcacgcc actattcctt 6180

ttatgaccca aagccaacac cgactgcaga gactccacca tttctgccac catctcacag 6240

gctgcggtga tatacttcgg attctgtgtg ttaggatcta tttcctcctc ctcctctctg 6300

atgacttttg gggtatttgt ccttctttct ggactaagaa gctgctctcc aggctgcact 6360

gcaacggcct ccaggatgaa gtgcacacag tggatgaggg agcaggcgtg ggtcacaaac 6420

tctgcggagg agaccacgct ccagaggcca ggcagctgca gggccaggca gcagcagtcc 6480

agccctgcct ggagatccag actcagcgga atctgctcat ggatcaaatg ccaggacagg 6540

gcctcaaggg ttgccaccac gaatttcatg gtgtccttct ctttctcagg aggaaggtgc 6600

aagtgactgg gcagtttgga gaccgccacc aggtactgtg ccagggcccg ggccagagtg 6660

gtcagggact gatacagcgc agcatcccca aatagatcat tcaacttgct ccagtaggcc 6720

gccggctctg caggcaggtc ggactggaag acgtggtgga cagcagggag ctgctgcacg 6780

gtgctgctca cgcgggccag agtcacctca caggctgctt caaaaagcgg actcttctgg 6840

ccaccagaaa tttcactcat ccctaggctt aagcatggag ctagcaggct taggttgaac 6900

tccgagttca tcatgaaggc actcatatct tcagcaggaa tccgattcac cagctctgca 6960

ccttccagca gtgcagaatc tgacctggtc caacactggg atttgacaag atgaatgtac 7020

cagtctttgt ccggactcac tgtttccagt gacacgtgcc catccccgtc cagcgggtgg 7080

gaagagactg ggggagaggg actaagtgag tcttgcatgg tggagagacg aaacctgtcc 7140

agcagggaat agagcctctg gtgtctctga gcgagcccgc tgctctgaag gtattcctgg 7200

attctgttga gttcttccat tggcaactgg gccatgctgc tctgtaaatt tgcagccaga 7260

agcatttcta cccggcgaca agcaaggatg tcgaccatgc gagccagcac acggaaaggg 7320

gtgcacagca gcctgtccac atacaacgtg agcacagctc ccgactggct gagatggatc 7380

ccctccaagc actgaagagt tttcttcaga gtggttggag ttgaaaggtt ttcacaacga 7440

gactgaattg cctggatgaa gaggccgctg gcagcggagt tccgatgaac agcactgatg 7500

aagtcctgta ctggaggctc gtgggaaagg ctgatcagat cttgaatgtg atttacaatg 7560

agccacgtta agtgctcgga gtcatggagg ttctgacaga cataatcaca gaagagaatg 7620

agagcccctc ttcgtactat ttctctattg cacactccaa gtttggctgc caagtcagaa 7680

tcctcctctt ctccagacat ctggggacta agtaactttg tgctggacag actgtgtctt 7740

ttcggggtct gctgcacttc tgcccaccag cggtagtcgg tgtggttgac aagcagcagg 7800

atctgacacc agagcagcac cagggccggg tgggtggtga tcatggaacg agcccgcaaa 7860

ttcaagctgt ccagggtgta gaaactgccg ccacagccat cactgcggaa cagtctagtg 7920

gcagctgctg tgattctccg gaacattcca gacttgaaga tgtggatcag acacattagc 7980

agagtgccta gttcttggca atagaaagta tgttgctgct cactcatttc caccttcagc 8040

tgttttgtaa caatgtcttc taaaagaata cccaccagtt gtaatagaaa ccttgaaaat 8100

gtttcttctg gcaaattctt tatttgtttc ccttcactgt gttcttctag tgctgaatta 8160

ctgtccccat ctcttagcct attaattact ggacaggaga ttaaatatgg agagaaagag 8220

agctcctgaa tacgagaaag aacaatatct tcagttgact gggaaatcag aaccctcaaa 8280

atggccagaa ttcctgatat ccacagttga acagtgctca cagatgccat tgtgtttgga 8340

gtgacgaaca tactccgtaa aagcatgtcc accggacgga gggaggaagg ggccaaaatc 8400

tcaaataatg tatttaacac tccaagggct tcatgagagt caatgtgcat ctgctgtttg 8460

gctaacattg ggaggatgat gtcagctatc tgtcgagaca gtcgcttcca cttgtcttca 8520

ttctccttgt ggcactgctg caggacgaga atgaacatct ccaacacctg atggtactgg 8580

atgagtctca gtaacattga taccaccact tctttttggg tttcaagctc ttttcctgca 8640

tcagctttat ttgttcctct taatacaaaa aggtcatgga ctatgggctg cagagccggt 8700

atggcgtgtg tcacagcctt ccttccactg gccatgatgc catcacagag ctgaatgatt 8760

ttaggaattc caatgatctg ttttgaatga tagcgttcat aagacagtaa taccaagaag 8820

aaaaagatgt ttggaatgat tgcctctgat tccctgaact ggcccacttc aatgtattcg 8880

aactgtttca atacaaagcc aataaacacc tgatctgaat ccagaagaca gtaattaacc 8940

cgtaactgaa ccagctgcgc cagcaaatct aaaacctgct tctgtaactg cacagatgtt 9000

gttgtcgtgt actgttttaa agcttttata acaagaggtt caaacaaacg aatgtgatta 9060

tgaatagcat tcttatctgc acggttcttt gtgacacttg tgaggttcgt cttcaactgg 9120

gtagacactt tctggaggac atcaaaccat cccgaggtgt cgtgctcctg ctccgcctgc 9180

accatgttcc tcaggctggc gtcagcgagg gcctgggtga agtgggtgta cggggccatg 9240

aagcagtagt ggtacaagcc tggcctcaca ctggaggagc caaggcgctg tgctcggcct 9300

tgtgacttgc tggggttgga tgataagccg tcaaactggg aggccaagtt tgtcccaaag 9360

agagtcttca acaattgttg aacacaaaca gttgccatca ttggttctcg actaaagcag 9420

gatttcaggt atcctaggat ctcctcaaca cacttcccaa tgtcctgcag tgtggccagc 9480

tctagaatct gagagagaac gtccaaggct gagcgaagaa accctccaaa tttttccgtg 9540

ctgttctgaa gatccaaggt gaccttgtag ttagcgtgcg tagctttcag gacatcatgc 9600

agtttgaggt atgaaggaag atgatagaaa ctccccagtg atgaggattt acttgttgta 9660

acaggacctg aggtatcaga ttgtctagaa gctgcactgg cctcactgcc tttcttggga 9720

ctcaacggta cagatgcttg ttctcctggt tctttctcct tccccttttcg tcggatggga 9780

cttagagaag gggggtttgt tagagaaggc aaggctgcct ttattgccgg tccaggagcc 9840

acgtcgtcca ggacatgtgc acaaatgttg atcaccttca gcaggtggga gaagagctgc 9900

tccaccatgg gcaccaaggc ccggtccccc agggctggcc agacctcctc ttgcttggtg 9960

gctgctgggt tggcttcttc ttcagaggcc catgaacttc tcagagattt aggagcactg 10020

gctgcaagca agtttccggc caaaatcaaa gcatcttgat gggctgagag atccaatggg 10080

aaccaagctg acgagagcag ggtcagaatc atcgtggcca tcccaacggt acagctcttc 10140

ctagactcat cggaggcgct cagtggaggc actccacagt gccaacctaa actccaaatg 10200

caaactggga aggcagtgga aagaagacac aaagcttcac agcatccaaa agtgagtgct 10260

ctcgtggttg atgtgatcag ttcatgagaa actgctgcaa taactcttga aaggttattt 10320

tccatagtga catctgttat gcttggcagt aggttatagc ctctgtatat tctggttatt 10380

gtgctgacgg agaaatgaga tggaggctgc gtctcatgca tgagaagttt caggtaaaca 10440

ctgctttgat ctcttgccac ggccactact gggtcagctt gtccttggtc acatttataa 10500

aacagctttg ggacaagcct aattaatgat gctgcagcaa catgtcgcac cctggggtct 10560

tcatccccaa gcaaatggat gacaacatta ttgagcactc gttcttgcag ctttaaaagc 10620

cctgtataat gatgagcccc tctgtgtaag ttttctgctt ttgcctccaa aaagctcacc 10680

agcctgaagt caatctccgc aagggtttcc agaagctctg tcctcaccag ccaataggaa 10740

ctgttcctca gagtcagcac gtcgatgatc agctgcagtc ctaactcact gtagctgctg 10800

ctgcagagac tcatgacaca atgcctcaca gctgtacagg ccagcttgca agtgacagaa 10860

gactcgtcct tcagtgtttt ccgcagcaaa ggaatgcaat ccgccaaaga aaatgtgttt 10920

cctgtcaggg ttctaatggc gcccatccaa tctcccacgt ggaagcggga cctgctgagg 10980

atggagcaga tgagggtccc acagagaatg gcagtggctc ctcgaacctg tgggtctcca 11040

tgatcgatgt agttcaagat atctgagaca tattgttcct cagggtattc tgtggtgtca 11100

agaggaactt tatagagttt gctgaagaaa gattctgggt ggagagccac agctgctccc 11160

acacagctga gggccagggc cttcacgctg accctcacat cccggtccgg aaccagcaca 11220

ttttttcccc ctgttagcaa aaatgaagca gataaaaggc ggacacaatg gacaagaggt 11280

gcagaatcat catcagtgga ctgtccaatg tcacctttga tgcggcaagg cttgttttct 11340

tgatcacccg gttcagtagc ttcatctctc aacacaaatt tatcaacact gctgtcagaa 11400

ggctgcctgc tgtgactcat gtttttcaat aaatgtgctt gttgaagggc catggaagag 11460

ttcctgaagg cctccgaggc ttcgtcagga agaacacctg tggcttcctc atcttcatcc 11520

tggggctgtc caatctgcag gcccaaatac tggttgtcgg taccgtctaa cacaatttca 11580

gaactgtctg aaggggtgac agctgaatca ggcccttcgg tggtggtctg ggagctgtcg 11640

ctgatgggcg aggaggcctg ggtcccatca ttcaggtcca tggcagggtc agatgggacg 11700

gcgctgacct ggctggagct gtggctcaag atatcctcct catccccatc cgtggcagag 11760

cttgtcaagt cacagctggc cagatccact gagtccgcct gcagcgtgtg ctgtgaccgt 11820

ggctgctccg tgatgatgtc gtgacctgct gaccctggag tggaaacccc tgaagaagta 11880

gccagctctc cactgatatc atccttcact gaggctgcaa aggcagagct gctgacatcc 11940

gatctcgatt cagagtcatc ctccaaggct tcttcttctc ctaagagcac tttgcctttt 12000

tgttttcttg aaaggacagg gctgcatgag gaacccctc cagctataag ttccacaata 12060

ctcccactac ggcttcggcc accagactcc tccttagcgg cggtaagctg cccaatgccc 12120

cccactgtgg tcagggcttg cagaagctcg gggggaggcg ttctgaagag ctgctgcaac 12180

agctccaggg ctccggtcac aacattgtgg tcttggtgct gtgtatgatg taacgtcagt 12240

tcataaacct ggacaagctg ctctgcagaa ggagagacct ccatttcttt ccgtgtcact 12300

ccgaagctgc ctttcaggct tgtatccttg acctgctgct gcagcaaggg caccaaatac 12360

ctcagggtga gcagcacgcc aagaatcagc agggtggagt gctcctcctc gacaggaacc 12420

agtaagccta agagcacatt tagtagccag ctatagaaat actgtgtcct tcttgagtgc 12480

tggcagatgc tcactgctga tccagcagct gtccgccgaa tagtggggga gcttgacttc 12540

aggttcgcta tgaaggcctt taacaaaacc ttaatttcat tgtcatttgc aaaattgccg 12600

aaagaagcca taattttggg aacagctgca gccaaggtct cctggactga ttcctcgggt 12660

ctcttgcttg ttcgacttag gcacggcaga aggttcacca ggtaaggcct gcatttctga 12720

ggccgaacca ggtgagccag ctcggcaaac ctccacaggg cagcacgcaa actccgaggg 12780

gcaccattct ttttaatttc tttatagagc tcgagctgta accttggaag attagaatcc 12840

atcaaagctt tgataacttt gttgaggcat tcatcagcca ccattctgac atccgactct 12900

gcgtcatcac tgcacagcag aaaaagttcc atagcgatgc ccagaagttt ctgaaattct 12960

ggagaatttc tgacagactg tgccactatg ttttcacata ttgtcagaca atgattcaca 13020

cggtctttct tggtagctga aagttctttc tttggtcggt gcagcggctc ctcagccaca 13080

gccgggccgg gtggtggcgg gggcggcggc gggggcggct gcggctgagg cagcatcggc 13140

tgtgcctgcg gcggctgagg aagctgagga ggaggaggcg gcggcggcgg cggcggcggc 13200

ggctgttgct gctgctgctg ctgctgctgc tgctggaagg acttgagaga ctcgaaggcc 13260

ttcatcagct tttccagggt cgccatggcg gtctcccgcc cggctaggca gtccccggag 13320

gcctcgggcc gactcgcagc gccgctcagc accggggcaa tgaatggggc tctgggccgc 13380

gggtaaaagc ggaaccgaag cggccgtcca tcttggaccc gtcccggcag cccccgcggc 13440

gccttgc 13447

<210> 11
<211> 16
<212> PRT
<213> Unknown

<220>
<221> source
<223> /note="Description of Unknown:
RFGF peptide sequence"

<400> 11
Ala Ala Val Ala Leu Leu Pro Ala Val Leu Leu Ala Leu Leu Ala Pro
1 5 10 15

<210> 12
<211> 11
<212> PRT
<213> Unknown

<220>
<221> source
<223> /note="Description of Unknown:
RFGF analogue sequence"

<400> 12
Ala Ala Leu Leu Pro Val Leu Leu Ala Ala Pro
1 5 10

<210> 13
<211> 13
<212> PRT
<213> Human immunodeficiency virus 1

<400> 13
Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln
1 5 10

<210> 14
<211> 16
<212> PRT
<213> Drosophila sp.

<400> 14
Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys
1 5 10 15

<210> 15
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 15
gcuauucaua aucacauucg a 21

<210> 16
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 16

ucgaauguga uuaugaauag cau 23

<210> 17
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 17
gcuauucaua aucacauucg a 21

<210> 18
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 18
ucgaauguga uuaugaauag cau 23

<210> 19
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 19
ucauaaucac auucguuugu a 21

<210> 20
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 20
uacaaacgaa ugugauuaug aau 23

<210> 21
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 21
gcuggugaau cggauuccug a 21

<210> 22
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 22
ucaggaaucc gauucaccag cuc 23

<210> 23
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 23
uggaaaagcu gaugaaggcc a 21

<210> 24
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 24
uggccutcau cagcuuuucc agg 23

<210> 25
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 25
ucauaaucac auucguuugu a 21

<210> 26
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 26
gcuggugaau cggauuccug a 21

<210> 27
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 27
uggaaaagcu gaugaaggcc a 21

<210> 28
<211> 21
<212> RNA

<213> Artificial Sequence

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

<400> 28
ccauggcgac ccuggaaaag a 21

<210> 29
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 29
uacaaacgaa ugugauuaug aau 23

<210> 30
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 30
ucaggaaucc gauucaccag cuc 23

<210> 31
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 31

uggccutcau cagcuuuucc agg 23

<210> 32
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 32
ucuuuuccag ggucgccaug gcg 23

<210> 33
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 33
ccauggcgac ccuggaaaag a 21

<210> 34
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 34
ucuuuuccag ggucgccaug gcg 23

<210> 35
<211> 19
<212> RNA
<213> Artificial Sequence

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

<400> 35
cuucgagucc cucaaguca 19

<210> 36
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 36
acccuggaaa agcugaugaa a 21

<210> 37
<211> 19
<212> RNA
<213> Artificial Sequence

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

<400> 37
ccuggaaaag cugaugaaa 19

<210> 38
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 38
cugaugaagg ccuucgaguc a 21

<210> 39
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 39
cugaagaagg ccuucgaguc a 21

<210> 40
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 40
gcgacccugg aaaagcugau a 21

<210> 41
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 41
ucccucaagu ccuuccagca a 21

<210> 42
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 42
ucccacaagu ccuuccagca a 21

<210> 43
<211> 19
<212> RNA
<213> Artificial Sequence

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

oligonucleotide"

<400> 43
ucagguucug cuuuuacca 19

<210> 44
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 44
cuucgagucc cucaaguccu a 21

<210> 45
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 45
gccgcucagg uucugcuuuu a 21

<210> 46
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 46
ccggucaggu ucugcuuuua a 21

<210> 47
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<221> source

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 47
ugactugagg gacucgaagg c 21

<210> 48
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 48
uuucaucagc uuuuccaggg ucg 23

<210> 49
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 49
uuucaucagc uuuuccaggg u 21

<210> 50
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 50
ugacucgaag gccuucauca gcu 23

<210> 51

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

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 51
ugactcgaag gccuucuuca gcu 23

<210> 52
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 52
uaucagcuuu uccagggucg cca 23

<210> 53
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 53
uaucagcuuu uccagggucg ccg 23

<210> 54
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 54
uugcuggaag gacuugaggg acu 23

<210> 55
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 55
uugctggaag gacuuguggg acu 23

<210> 56
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 56
ugguaaaagc agaaccugag c 21

<210> 57
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 57
uaggactuga gggacucgaa ggc 23

<210> 58
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 58
uaaaagcaga accugagcgg ccg 23

<210> 59
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 59
uuaaaagcag aaccugaccg gcc 23

<210> 60
<211> 19
<212> RNA
<213> Artificial Sequence

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

<400> 60
cuucgagucc cucaaguca 19

<210> 61
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 61

acccuggaaa agcugaugaa a 21

<210> 62
<211> 19
<212> RNA
<213> Artificial Sequence

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

<400> 62
ccuggaaaag cugaugaaa 19

<210> 63
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 63
cugaugaagg ccuucgaguc a 21

<210> 64
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 64
cugaagaagg ccuucgaguc a 21

<210> 65
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 65
gcgacccugg aaaagcugau a 21

<210> 66
<211> 21
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 66
gcgacccugg aaaagcugau a 21

<210> 67
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 67
ucccucaagu ccuuccagca a 21

<210> 68
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 68
ucccacaagu ccuuccagca a 21

<210> 69
<211> 19
<212> RNA
<213> Artificial Sequence

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

<400> 69
ucagguucug cuuuuacca 19

<210> 70
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 70
cuucgagucc cucaaguccu a 21

<210> 71
<211> 21
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 71
gccgcucagg uucugcuuuu a 21

<210> 72
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 72
ccggucaggu ucugcuuuua a 21

<210> 73
<211> 21
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 73
ugactugagg gacucgaagg c 21

<210> 74
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 74
uuucaucagc uuuuccaggg ucg 23

<210> 75
<211> 21
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 75
uuucaucagc uuuuccaggg u 21

<210> 76

<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 76
ugacucgaag gccuucauca gcu 23

<210> 77
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 77
ugactcgaag gccuucuuca gcu 23

<210> 78
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 78
uaucagcuuu uccagggucg cca 23

<210> 79
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 79
uaucagcuuu uccagggucg ccg 23

<210> 80
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 80
uugcuggaag gacuugaggg acu 23

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 81
uugctggaag gacuuguggg acu 23

<210> 82
<211> 21
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source

<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 82
ugguaaaagc agaaccugag c 21

<210> 83
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 83
uaggactuga gggacucgaa ggc 23

<210> 84
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 84
uaaaagcaga accugagcgg ccg 23

<210> 85
<211> 23
<212> DNA
<213> Artificial Sequence

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

<220>
<221> source
<223> /note="Description of Combined DNA/RNA Molecule: Synthetic
oligonucleotide"

<400> 85
uuaaaagcag aaccugaccg gcc 23

<210> 86
<211> 21
<212> RNA
<213> Homo sapiens

<400> 86
gccuucgagu cccucaaguc c 21

<210> 87
<211> 23
<212> RNA
<213> Homo sapiens

<400> 87
cgccauggcg acccuggaaa agc 23

<210> 88
<211> 23
<212> RNA
<213> Homo sapiens

<400> 88
cgacccugga aaagcugaug aag 23

<210> 89
<211> 21
<212> RNA
<213> Homo sapiens

<400> 89
acccuggaaa agcugaugaa g 21

<210> 90
<211> 23
<212> RNA
<213> Homo sapiens

<400> 90
agcugaugaa ggccuucgag ucc 23

<210> 91

<211> 23
<212> RNA
<213> Homo sapiens

<400> 91
uggcgacccu ggaaaagcug aug 23

<210> 92
<211> 23
<212> RNA
<213> Homo sapiens

<400> 92
agucccucaa guccuuccag cag 23

<210> 93
<211> 21
<212> RNA
<213> Homo sapiens

<400> 93
gcucagguuc ugcuuuuacc u 21

<210> 94
<211> 23
<212> RNA
<213> Homo sapiens

<400> 94
gccuucgagu cccucaaguc cuu 23

<210> 95
<211> 23
<212> RNA
<213> Homo sapiens

<400> 95
cggccgcuca gguucugcuu uua 23

<210> 96
<211> 23
<212> RNA
<213> Homo sapiens

<400> 96
ggccgcucag guucugcuuu uac 23

<210> 97
<211> 21

<212> RNA
<213> Artificial Sequence

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

<400> 97
ccagagcccc auucauugcc a 21

<210> 98
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 98
uggcaaugaa uggggcucug ggc 23

<210> 99
<211> 21
<212> RNA
<213> Artificial Sequence

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

<400> 99
ccagagcccc auucauugcc a 21

<210> 100
<211> 23
<212> RNA
<213> Artificial Sequence

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

<400> 100
uggcaaugaa uggggcucug ggc 23

<210> 101

<211> 23
<212> RNA
<213> Homo sapiens

<400> 101
gcccagagcc ccauucauug ccc 23