eolf-seql
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<120> Novel artificial nucleic acid molecules

<130> CU01P167WO1

<150> PCT/EP2014/003479
<151> 2014-12-30

<160> 388

<170> PatentIn version 3.5

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taaaaccatc acctgcttac acctttttga actttatatt cattgtctta caattagttt 180

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gatggtcaac actatcttag tgctagccct ccctagagtt accccgaagg tcaatacttg 360

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<400> 24
tcgttgacac tcaccatttc tgtgaaagac ttttttttt ttaacatatt atactagatt 60

tgactaactc aatcttgtag cttctgcagt tctccccacc cccaacctag ttcttagagt 120

atgtttcccc ttttgaaaca tgtaaacata ctttgggcat aaatattttt taaaatataa 180

ctataatgct tcactaatac cttaaaaatg cctagtgaac taactcagta cattatataa 240

tggccaagtg aaagttttgt gttttcatgt cctgtttttc tttgaaatta tatagcccag 300

aaattagctc attatctgaa aaacgtatga agaactgatg aattgtataa tacaggagta 360

ttgccattga atgtactgtt tgatttattc aagcaggtaa tgaacaatgt tgtcaaactc 420

tctaatgaga catcataatt aggacataag ctaaaagggg cattactccg gcagtctttt 480

tttcttaatc ctagtaccat acatattctt tggcatgaaa gaatgaaaag cattagtaaa 540

caactgaagt cctaccatgg ctctgtaggg tttttggaac aattcctgga attggaaagt 600

gaaaatggat agcatgtggg ggaaaccctc atctgagtag caagatttta gtaaagatga 660

ctaagccatt aacagcatgc attcatattt aattttattg actcctgcca tcagcttttg 720

tagatcgttt gggtggaagg ttgtgatttt tactgggagg acttgagtag aagtggatga 780

ttaaaattga ggagtatata attctttctg ggactgctta aatgttattg tttgaaaata 840

ccttcacttt ccccctttgg tcaaagagat gtgcttaaaa ttcttattcc ttcacaataa 900

ataattttga ttttcttaga caggtttgtg tttaggtatg agtttctctt ttacttcatc 960

tagcaattct ctctgtggtc agaagaactc tgaagaaagc tttgagggaa atgaatataa 1020

ctcttaaatt attatatgtg tgtgtatata tatagtttaa ctttaaaaat aatttattag 1080

tcatcataaa gaaataaatg tctctggctc aagatgttac ttatttcctt cttttatatt 1140

ttctagtctc aattactgtt ccaaaaggag ctatcttaga acttagacta gagatccaga 1200

ttaa 1204

<210> 25
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus MP68 5'-UTR

<400> 25
ctttcccatt ctgtagcaga atttggtgtt gcctgtggtc ttggtcccgc ggag 54

<210> 26
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens MP68 5'-UTR

<400> 26
cttcccggca tcccctgcgc gcgcctgcgc gctcggtgac ctttccgagt tggctgcaga 60

tttgtggtgc gttctgagcc gtctgtcctg cgccaag 97

<210> 27
<211> 315
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens MP68 5'-UTR

<400> 27
cttcccggca tcccctgcgc gcgcctgcgc gctcggtgac ctttccgagt tggctgcaga 60

tttgtggtgc gttctgagcc gtctgtcctg cgccaaggga gcgtaccttg gccttgagag 120

gttcagctgc ctaacccaga ggctacgcag agttagagaa gccagagtcc aagccaagaa 180

ctctgactcc acatccagtc ccttctctcc tttataactc aagtttcctt gcgccacact 240

gccctccacg ttatgctgta catgacaact tgggtgaggc aacagggaag ctgaaaagag 300

atcatacggt gctga 315

<210> 28
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus NDUFA4 5'-UTR

<400> 28
gtccgctcag ccaggttgca gaagcggctt agcgtgtgtc ctaatcttct ctctgcgtgt 60

aggtaggcct gtgccgcaaa c 81

<210> 29
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens NDUFA4 5'-UTR

<400> 29
guccgcucag ccagguugca gaagcggcuu agcgugugguc cuaaucuucu cucugcgugu 60

agguaggccu gugccgcaaa c 81

<210> 30
<211> 129
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens NDUFA4 5'-UTR

<400> 30
gggtccttca ggtaggaggt cctgggtgac tttggaagtc cgtagtgtct cattgcagat 60

aatttttagc ttagggcctg gtggctaggt cggttctctc ctttccagtc ggagacctct 120

gccgcaaac 129

<210> 31
<211> 186
<212> DNA
<213> Artificial Sequence

<220>
<223> Human albumin 3'-UTR

<400> 31

catcacattt aaaagcatct cagcctacca tgagaataag agaaagaaaa tgaagatcaa 60

aagcttattc atctgttttt ctttttcgtt ggtgtaaagc caacaccctg tctaaaaaac 120

ataaatttct ttaatcattt tgcctctttt ctctgtgctt caattaataa aaaatggaaa 180

gaatct 186

<210> 32
<211> 186
<212> DNA
<213> Artificial Sequence

<220>
<223> albumin7 3'-UTR

<400> 32
catcacattt aaaagcatct cagcctacca tgagaataag agaaagaaaa tgaagatcaa 60

tagcttattc atctcttttt ctttttcgtt ggtgtaaagc caacaccctg tctaaaaaac 120

ataaatttct ttaatcattt tgcctctttt ctctgtgctt caattaataa aaaatggaaa 180

gaacct 186

<210> 33
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> 5'-UTR of human ribosomal protein Large 32 lacking the 5' terminal oligopyrimidine tract

<400> 33
ggcgctgcct acggaggtgg cagccatctc cttctcggca tc 42

<210> 34
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> histone stem-loop

<400> 34
caaaggctct tttcagagcc acca 24

<210> 35
<211> 1848
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - A64 - C30 - hSL

<400> 35
ggggcgcugc cuacggaggu ggcagccauc uccuucucgg caucaagcuu gaggauggag 60

gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

aaguacgacc ugucgaaccu gcacgagauc gccagcgggg gcgccccgcu gagcaaggag 1020

gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

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ggcgugaacc agcggggcga gcugugcgug cgggggccga ugaucaugag cggcuacgug 1260

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aacaucuucg acgccggcgu ggccgggcug ccggacgacg acgccggcga gcugccggcc 1500

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ccgaagggcc ugaccgggaa gcucgacgcc cggaagaucc gcgagauccu gaucaaggcc 1680

aagaagggcg gcaagaucgc cguguaagac uaguagaucu aaaaaaaaaa aaaaaaaaaa 1740

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaugcauc cccccccccc 1800

cccccccccc cccccccccc aaaggcucuu uucagagcca ccagaauu 1848

<210> 36
<211> 2201
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - gnas-A64-C30-hSL

<400> 36
ggggcgcugc cuacggaggu ggcagccauc uccuucucgg caucaagcuu gaggauggag 60

gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

aaguacgacc ugucgaaccu gcacgagauc gccagcgggg gcgccccgcu gagcaaggag 1020

gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

ggcaaggugg ucccguucuu cgaggccaag gugguggacc uggacaccgg caagacccug 1200

ggcgugaacc agcggggcga gcugugcgug cgggggccga ugaucaugag cggcuacgug 1260

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aucgccuacu gggacgagga cgagcacuuc uucaucgucg accggcugaa gucgcugauc 1380

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gcgguggugg ugcuggagca cggcaagacc augacggaga aggagaucgu cgacuacgug 1560

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aagaagggcg gcaagaucgc cguguaagac uagugaaggg aacacccaaa uuuaauucag 1740

ccuuaagcac aauuaauuaa gagugaaacg uaauuguaca agcaguuggu cacccaccau 1800

agggcaugau caacaccgca accuuuccuu uuucccccag ugauucugaa aaaccccucu 1860

ucccuucagc uugcuuagau guuccaaauu uaguaagcuu aaggcggccu acagaagaaa 1920

aagaaaaaaa aggccacaaa aguucccucu cacuuucagu aaauaaaaua aaagcagcaa 1980

cagaaauaaa gaaauaaaug aaauucaaaa ugaaauaaau auuguguugu gcagcauuaa 2040

aaaaucaaua aaaauuaaaa augagcaaga ucuaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaugc aucccccccc cccccccccc 2160

ccccccccccc cccaaaggcu cuuuucagag ccaccagaau u 2201

<210> 37
<211> 1965
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - morn2- A64 - C30 - hSL

<400> 37
ggggcgcugc cuacggaggu ggcagccauc uccuucucgg caucaagcuu gaggauggag 60

gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

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uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

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gccucugcaa ccccccuuag gcaaagcaac ugaaccuucu gcuaaaguga ccugcccucu 1800

uccguaaguc caauaaaguu gucaugcacc cagaucuaaa aaaaaaaaaa aaaaaaaaaa 1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa augcaucccc cccccccccc 1920

cccccccccc ccccccccaaa ggcucuuuuc agagccacca gaauu 1965

<210> 38
<211> 2286
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - gstm1- A64 - C30 - hSL

<400> 38
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gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

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uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

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gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

ggcaaggugg ucccguucuu cgaggccaag gugguggacc uggacaccgg caagacccug 1200

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ucuccucacc cucuucccag ucaaguccac acagccuuca uucuccccag uuucuuucac 1920

auggccccuu cuucauuggc ucccugaccc aaccucacag cccguuucug cgaacugagg 1980

ucuguccuga acucacgcuu ccuagaauua ccccgauggu caacacuauc uuagugcuag 2040

cccucccuag aguuaccccg aaggucaaua cuugagugcc agccuguucc ugguggagua 2100

gccucccccag gucugucucg ucuacaauaa agucugaaac acacuugcca ugagaucuaa 2160

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2220

aaugcauccc ccccccccccc ccccccccccc ccccccccaa aggcucuuuu cagagccacc 2280

agaauu 2286

<210> 39
<211> 1981
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - ndufa1 - A64 - C30 - hSL

<400> 39
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gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

aaguacgacc ugucgaaccu gcacgagauc gccagcgggg gcgccccgcu gagcaaggag 1020

gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

ggcaaggugg ucccguucuu cgaggccaag gugguggacc uggacaccgg caagacccug 1200

ggcgugaacc agcggggcga gcugugcgug cgggggccga ugaucaugag cggcuacgug 1260

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gaaauuacuc agcuaugguc aucuguuccu guuagaaggc uaugcagcau auuauauacu 1800

augcgcaugu uaugaaaugc auaauaaaaa auuuuaaaaa aucuaaaaga ucuaaaaaaa 1860

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaugc 1920

aucccccccc cccccccccc cccccccccc cccaaaggcu cuuuucagag ccaccagaau 1980

u 1981

<210> 40
<211> 2085
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - cbr2 - A64 - C30 - hSL

<400> 40
ggggcgcugc cuacggaggu ggcagccauc uccuucucgg caucaagcuu gaggauggag 60

gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

aaguacgacc ugucgaaccu gcacgagauc gccagcgggg gcgccccgcu gagcaaggag 1020

gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

ggcaaggugg ucccguucuu cgaggccaag gugguggacc uggacaccgg caagacccug 1200

ggcgugaacc agcggggcga gcugugcgug cgggggccga ugaucaugag cggcuacgug 1260

aacaacccgg aggccaccaa cgcccucauc gacaaggacg gcuggcugca cagcggcgac 1320

aucgccuacu gggacgagga cgagcacuuc uucaucgucg accggcugaa gucgcugauc 1380

aaguacaagg gcuaccaggu ggcgccggcc gagcuggaga gcauccugcu ccagcacccc 1440

aacaucuucg acgccggcgu ggccgggcug ccggacgacg acgccggcga gcugccggcc 1500

gcgguggugg ugcuggagca cggcaagacc augacggaga aggagaucgu cgacuacgug 1560

gccagccagg ugaccaccgc caagaagcug cggggcggcg ugguguucgu ggacgaggac 1620

ccgaagggcc ugaccgggaa gcucgacgcc cggaagaucc gcgagauccu gaucaaggcc 1680

aagaagggcg gcaagaucgc cguguaagac uaguucugcu caguugccgc ggacaucuga 1740

guggccuucu uagccccacc cucagccaaa gcauuuacug aucucgugac uccgcccuca 1800

ugcuacagcc acgcccacca cgcagcucac aguuccaccc ccauguuacu gucgauccca 1860

caaccacucc aggcgcagac cuuguucucu uuguccacuu uguugggcuc auuugccuaa 1920

auaaacgggc caccgcguua ccuuuaacua uagaucuaaa aaaaaaaaaa aaaaaaaaaa 1980

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa augcaucccc ccccccccccc 2040

ccccccccccc ccccccccaaa ggcucuuuuc agagccacca gaauu 2085

<210> 41
<211> 1997
<212> RNA
<213> Artificial Sequence

<220>
<223> PpLuc(GC) - albumin7- A64 - C30 - hSL

<400> 41
gggagaaagc uugaggaugg aggacgccaa gaacaucaag aagggcccgg cgcccuucua 60

cccgcuggag gacgggaccg ccggcgagca gcuccacaag gccaugaagc gguacgcccu 120

ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180

guacuucgag augagcgugc gccuggccga ggccaugaag cgguacggcc ugaacaccaa 240

ccaccggauc gugguugugcu cggagaacag ccugcaguuc uucaugccgg ugcugggcgc 300

ccucuucauc ggcguggccg ucgccccggc gaacgacauc uacaacgagc gggagcugcu 360

gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420

gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480

gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540

cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600

caugaacagc agcggcagca ccggccugcc gaaggggugg gcccugccgc accggaccgc 660

cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720

cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780

ccucaucugc ggcuuccggg ugguccugau guaccgguuc gaggaggagc uguuccugcg 840

gagccugcag gacuacaaga uccagagcgc gcugcucgug ccgacccugu ucagcuucuu 900

cgccaagagc acccugaucg acaaguacga ccugucgaac cugcacgaga ucgccagcgg 960

gggcgccccg cugagcaagg aggugggcga ggccguggcc aagcgguucc accucccggg 1020

cauccgccag ggcuacggcc ugaccgagac cacgagcgcg auccugauca cccccgaggg 1080

ggacgacaag ccgggcgccg ugggcaaggu ggucccguuc uucgaggcca agguggugga 1140

ccuggacacc ggcaagaccc ugggcgugaa ccagcggggc gagcugugcg ugcgggggcc 1200

gaugaucaug agcggcuacg ugaacaaccc ggaggccacc aacgcccuca ucgacaagga 1260

cggcuggcug cacagcggcg acaucgccua cugggacgag gacgagcacu ucuucaucgu 1320

cgaccggcug aagucgcuga ucaaguacaa gggcuaccag guggcgccgg ccgagcugga 1380

gagcauccug cuccagcacc ccaacaucuu cgacgccggc guggccgggc ugccggacga 1440

cgacgccggc gagcugccgg ccgcgguggu ggugcuggag cacggcaaga ccaugacgga 1500

gaaggagauc gucgacuacg uggccagcca ggugaccacc gccaagaagc ugcggggcgg 1560

cgugguguuc guggacgagg ucccgaaggg ccugaccggg aagcucgacg cccggaagau 1620

ccgcgagauc cugaucaagg ccaagaaggg cggcaagauc gccguguaag acuagugcau 1680

cacauuuaaa agcaucucag ccuaccauga gaauaagaga aagaaaauga agaucaauag 1740

cuuauucauc ucuuuuucuu uuucguuggu guaaagccaa cacccugucu aaaaaacaua 1800

aauuucuuua aucauuuugc cucuuuucuc ugugcuucaa uuaauaaaaa auggaaagaa 1860

ccuagaucua aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920

aaaaaaaaaa aaaugcaucc cccccccccc cccccccccc cccccccccc aaggcucuuu 1980

ucagagccac cagaauu 1997

<210> 42
<211> 2048
<212> RNA
<213> Artificial Sequence

<220>
<223> Mp68 - PpLuc(GC) - albumin7- A64 - C30 - hSL

<400> 42
gggcuuuccc auucuguagc agaauuuggu guugccugug gucuuggucc cgcggagaag 60

cuugaggaug gaggacgcca agaacaucaa gaagggcccg gcgcccuucu acccgcugga 120

ggacgggacc gccggcgagc agcuccacaa ggccaugaag cgguacgccc uggugccggg 180

cacgaucgcc uucaccgacg cccacaucga ggucgacauc accuacgcgg aguacuucga 240

gaugagcgug cgccuggccg aggccaugaa gcgguacggc cugaacacca accaccggau 300

cgugguguc ucggagaaca gccugcaguu cuucaugccg gugcugggcg cccucuucau 360

cggcguggcc gucgccccgg cgaacgacau cuacaacgag cgggagcugc ugaacagcau 420

ggggaucagc cagccgaccg ugguguucgu gagcaagaag ggccugcaga agauccugaa 480

cgugcagaag aagcugccca ucauccagaa gaucaucauc auggacagca agaccgacua 540

ccagggcuuc cagucgaugu acacguucgu gaccagccac cucccgccgg gcuucaacga 600

guacgacuuc gucccggaga gcuucgaccg ggacaagacc aucgcccuga ucaugaacag 660

cagcggcagc accggccugc cgaagggggu ggcccugccg caccggaccg ccugcgugcg 720

cuucucgcac gcccgggacc ccaucuucgg caaccagauc aucccggaca ccgccauccu 780

gagcguggug ccguuccacc acggcuucgg cauguucacg acccugggcu accucaucug 840

cggcuuccgg gugguccuga uguaccgguu cgaggaggag cuguuccugc ggagccugca 900

ggacuacaag auccagagcg cgcugcucgu gccgacccug uucagcuucu ucgccaagag 960

cacccugauc gacaaguacg accugucgaa ccugcacgag aucgccagcg ggggcgcccc 1020

gcugagcaag gaggugggcg aggccguggc caagcgguuc caccucccgg gcauccgcca 1080

gggcuacggc cugaccgaga ccacgagcgc gauccugauc acccccgagg gggacgacaa 1140

gccgggcgcc gugggcaagg uggucccguu cuucgaggcc aagguggugg accuggacac 1200

cggcaagacc cugggcguga accagcgggg cgagcugugc gugcgggggc cgaugaucau 1260

gagcggcuac gugaacaacc cggaggccac caacgcccuc aucgacaagg acggcuggcu 1320

gcacagcggc gacaucgccu acugggacga ggacgagcac uucuucaucg ucgaccggcu 1380

gaagucgcug aucaaguaca agggcuacca gguggcgccg gccgagcugg agagcauccu 1440

gcuccagcac cccaacaucu ucgacgccgg cguggccggg cugccggacg acgacgccgg 1500

cgagcugccg gccgcggugg uggugcugga gcacggcaag accaugacgg agaaggagau 1560

cgucgacuac guggccagcc aggugaccac cgccaagaag cugcggggcg gcgugguguu 1620

cguggacgag gucccgaagg gccugaccgg gaagcucgac gcccggaaga uccgcgagau 1680

ccugaucaag gccaagaagg gcggcaagau cgccguguaa gacuagugca ucacauuuaa 1740

aagcaucuca gccuaccaug agaauaagag aaagaaaaug aagaucaaua gcuuauucau 1800

cucuuuuucu uuuucguugg uguaaagcca acacccuguc uaaaaaacau aaauuucuuu 1860

aaucauuuug ccucuuuucu cugugcuuca auuaauaaaa aauggaaaga accuagaucu 1920

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980

aaaaugcauc ccccccccccc ccccccccccc ccccccccccc aaaggcucuu uucagagcca 2040

ccagaauu 2048

<210> 43
<211> 2075
<212> RNA
<213> Artificial Sequence

<220>
<223> Ndufa4 - PpLuc(GC) - albumin7- A64 - C30 - hSL

<400> 43
gggguccgcu cagccagguu gcagaagcgg cuuagcgugu guccuaaucu ucucucugcg 60

uguagguagg ccugugccgc aaacaagcuu gaggauggag gacgccaaga acaucaagaa 120

gggcccggcg cccuucuacc cgcuggagga cgggaccgcc ggcgagcagc uccacaaggc 180

caugaagcgg uacgcccugg ugccgggcac gaucgccuuc accgacgccc acaucgaggu 240

cgacaucacc uacgcggagu acuucgagau gagcgugcgc cuggccgagg ccaugaagcg 300

guacggccug aacaccaacc accggaucgu ggugugcucg gagaacagcc ugcaguucuu 360

caugccggug cugggcgccc ucuucaucgg cguggccguc gccccggcga acgacaucua 420

caacgagcgg gagcugcuga acagcauggg gaucagccag ccgaccgugg uguucgugag 480

caagaagggc cugcagaaga uccugaacgu gcagaagaag cugcccauca uccagaagau 540

caucaucaug gacagcaaga ccgacuacca gggcuuccag ucgauguaca cguucgugac 600

cagccaccuc ccgccgggcu ucaacgagua cgacuucguc ccggagagcu ucgaccggga 660

caagaccauc gcccugauca ugaacagcag cggcagcacc ggccugccga aggggguggc 720

ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc cgggacccca ucuucggcaa 780

ccagaucauc ccggacaccg ccauccugag cguggugccg uuccaccacg gcuucggcau 840

guucacgacc cugggcuacc ucaucugcgg cuuccgggug guccugaugu accgguucga 900

ggaggagcug uuccugcgga gccugcagga cuacaagauc cagagcgcgc ugcucgugcc 960

gacccuguuc agcuucuucg ccaagagcac ccugaucgac aaguacgacc ugucgaaccu 1020

gcacgagauc gccagcgggg gcgccccgcu gagcaaggag gugggcgagg ccguggccaa 1080

gcgguuccac cucccgggca uccgccaggg cuacggccug accgagacca cgagcgcgau 1140

ccugaucacc cccgaggggg acgacaagcc gggcgccgug ggcaaggugg ucccguucuu 1200

cgaggccaag gugguggacc uggacaccgg caagacccug ggcgugaacc agcggggcga 1260

gcugugcgug cgggggccga ugaucaugag cggcuacgug aacaacccgg aggccaccaa 1320

cgcccucauc gacaaggacg gcuggcugca cagcggcgac aucgccuacu gggacgagga 1380

cgagcacuuc uucaucgucg accggcugaa gucgcugauc aaguacaagg gcuaccaggu 1440

ggcgccggcc gagcuggaga gcauccugcu ccagcacccc aacaucuucg acgccggcgu 1500

ggccgggcug ccggacgacg acgccggcga gcugccggcc gcgguggugg ugcuggagca 1560

cggcaagacc augacggaga aggagaucgu cgacuacgug gccagccagg ugaccaccgc 1620

caagaagcug cggggcggcg ugguguucgu ggacgagguc ccgaagggcc ugaccgggaa 1680

gcucgacgcc cggaagaucc gcgagauccu gaucaaggcc aagaagggcg gcaagaucgc 1740

cguguaagac uagugcauca cauuuaaaag caucucagcc uaccaugaga auaagagaaa 1800

gaaaaugaag aucaauagcu uauucaucuc uuuuucuuuu ucguuggugu aaagccaaca 1860

cccugucuaa aaaacauaaa uuucuuuaau cauuuugccu cuuuucucug ugcuucaauu 1920

aauaaaaaau ggaaagaacc uagaucuaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa augcaucccc ccccccccccc ccccccccccc 2040

ccccccccaaa ggcucuuuuc agagccacca gaauu 2075

<210> 44
<211> 1810
<212> DNA
<213> Artificial Sequence

<220>
<223> PpLuc(GC) - A64 - C30 - hSL

<400> 44
gggagaaagc ttgaggatgg aggacgccaa gaacatcaag aagggcccgg cgcccttcta 60

cccgctggag gacgggaccg ccggcgagca gctccacaag gccatgaagc ggtacgccct 120

ggtgccgggc acgatcgcct tcaccgacgc ccacatcgag gtcgacatca cctacgcgga 180

gtacttcgag atgagcgtgc gcctggccga ggccatgaag cggtacggcc tgaacaccaa 240

ccaccggatc gtggtgtgct cggagaacag cctgcagttc ttcatgccgg tgctgggcgc 300

cctcttcatc ggcgtggccg tcgccccggc gaacgacatc tacaacgagc gggagctgct 360

gaacagcatg gggatcagcc agccgaccgt ggtgttcgtg agcaagaagg gcctgcagaa 420

gatcctgaac gtgcagaaga agctgcccat catccagaag atcatcatca tggacagcaa 480

gaccgactac cagggcttcc agtcgatgta cacgttcgtg accagccacc tcccgccggg 540

cttcaacgag tacgacttcg tcccggagag cttcgaccgg gacaagacca tcgccctgat 600

catgaacagc agcggcagca ccggcctgcc gaaggggtg gccctgccgc accggaccgc 660

ctgcgtgcgc ttctcgcacg cccgggaccc catcttcggc aaccagatca tcccggacac 720

cgccatcctg agcgtggtgc cgttccacca cggcttcggc atgttcacga ccctgggcta 780

cctcatctgc ggcttccggg tggtcctgat gtaccggttc gaggaggagc tgttcctgcg 840

gagcctgcag gactacaaga tccagagcgc gctgctcgtg ccgaccctgt tcagcttctt 900

cgccaagagc accctgatcg acaagtacga cctgtcgaac ctgcacgaga tcgccagcgg 960

gggcgccccg ctgagcaagg aggtgggcga ggccgtggcc aagcggttcc acctcccggg 1020

catccgccag ggctacggcc tgaccgagac cacgagcgcg atcctgatca cccccgaggg 1080

ggacgacaag ccgggcgccg tgggcaaggt ggtcccgttc ttcgaggcca aggtggtgga 1140

cctggacacc ggcaagaccc tgggcgtgaa ccagcggggc gagctgtgcg tgcgggggcc 1200

gatgatcatg agcggctacg tgaacaaccc ggaggccacc aacgccctca tcgacaagga 1260

cggctggctg cacagcggcg acatcgccta ctgggacgag gacgagcact tcttcatcgt 1320

cgaccggctg aagtcgctga tcaagtacaa gggctaccag gtggcgccgg ccgagctgga 1380

gagcatcctg ctccagcacc ccaacatctt cgacgccggc gtggccgggc tgccggacga 1440

cgacgccggc gagctgccgg ccgcggtggt ggtgctggag cacggcaaga ccatgacgga 1500

gaaggagatc gtcgactacg tggccagcca ggtgaccacc gccaagaagc tgcggggcgg 1560

cgtggtgttc gtggacgagg tcccgaaggg cctgaccggg aagctcgacg cccggaagat 1620

ccgcgagatc ctgatcaagg ccaagaaggg cggcaagatc gccgtgtaag actagtagat 1680

ctaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1740

aaaaaatgca tccccccccc cccccccccc cccccccccc ccaaaggctc ttttcagagc 1800

caccagaatt 1810

<210> 45
<211> 2163
<212> RNA
<213> Artificial Sequence

<220>
<223> PpLuc(GC) - gnas- A64 - C30 - hSL

<400> 45
gggagaaagc uugaggaugg aggacgccaa gaacaucaag aagggcccgg cgcccuucua 60

cccgcuggag gacgggaccg ccggcgagca gcuccacaag gccaugaagc gguacgcccu 120

ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180

guacuucgag augagcgugc gccuggccga ggccaugaag cgguacggcc ugaacaccaa 240

ccaccggauc guggugugcu cggagaacag ccugcaguuc uucaugccgg ugcugggcgc 300

ccucuucauc ggcguggccg ucgccccggc gaacgacauc uacaacgagc gggagcugcu 360

gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420

gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480

gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540

cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600

caugaacagc agcggcagca ccggccugcc gaagggggug gcccugccgc accggaccgc 660

cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720

cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780

ccucaucugc ggcuuccggg ugguccugau guaccgguuc gaggaggagc uguuccugcg 840

gagccugcag gacuacaaga uccagagcgc gcugcucgug ccgacccugu ucagcuucuu 900

cgccaagagc acccugaucg acaaguacga ccugucgaac cugcacgaga ucgccagcgg 960

gggcgccccg cugagcaagg aggugggcga ggccguggcc aagcgguucc accucccggg 1020

cauccgccag ggcuacggcc ugaccgagac cacgagcgcg auccugauca cccccgaggg 1080

ggacgacaag ccgggcgccg ugggcaaggu ggucccguuc uucgaggcca aggugggugga 1140

ccuggacacc ggcaagaccc ugggcgugaa ccagcggggc gagcugugcg ugcgggggcc 1200

gaugaucaug agcggcuacg ugaacaaccc ggaggccacc aacgcccuca ucgacaagga 1260

cggcuggcug cacagcggcg acaucgccua cugggacgag gacgagcacu ucuucaucgu 1320

cgaccggcug aagucgcuga ucaaguacaa gggcuaccag guggcgccgg ccgagcugga 1380

gagcauccug cuccagcacc ccaacaucuu cgacgccggc guggccgggc ugccggacga 1440

cgacgccggc gagcugccgg ccgcgguggu ggugcuggag cacggcaaga ccaugacgga 1500

gaaggagauc gucgacuacg uggccagcca ggugaccacc gccaagaagc ugcggggcgg 1560

cgugguguuc guggacgagg ucccgaaggg ccugaccggg aagcucgacg cccggaagau 1620

ccgcgagauc cugaucaagg ccaagaaggg cggcaagauc gccguguaag acuagugaag 1680

ggaacaccca aauuuaauuc agccuuaagc acaauuaauu aagagugaaa cguaauugua 1740

caagcaguug gucacccacc auagggcaug aucaacaccg caaccuuucc uuuuucccccc 1800

agugauucug aaaaaccccu cuucccuuca gcuugcuuag auguuccaaa uuuaguaagc 1860

uuaaggcggc cuacagaaga aaaagaaaaa aaaggccaca aaaguucccu cucacuuuca 1920

guaaauaaaa uaaaagcagc aacagaaaua aagaaauaaa ugaaauucaa aaugaaauaa 1980

auauuguguu gugcagcauu aaaaaaucaa uaaaaauuaa aaaugagcaa gaucuaaaaa 2040

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaau 2100

gcaucccccc ccccccccccc ccccccccccc cccccaaagg cucuuuucag agccaccaga 2160

auu 2163

<210> 46
<211> 2264
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - Ybx1(V2)-A64-C30-hSL

<400> 46
ggggcgcugc cuacggaggu ggcagccauc uccuucucgg caucaagcuu gaggauggag 60

gacgccaaga acaucaagaa gggcccggcg cccuucuacc cgcuggagga cgggaccgcc 120

ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

guccugaugu accgguucga ggaggagcug uuccugcgga gccugcagga cuacaagauc 900

cagagcgcgc ugcucgugcc gacccuguuc agcuucuucg ccaagagcac ccugaucgac 960

aaguacgacc ugucgaaccu gcacgagauc gccagcgggg gcgccccgcu gagcaaggag 1020

gugggcgagg ccguggccaa gcgguuccac cucccgggca uccgccaggg cuacggccug 1080

accgagacca cgagcgcgau ccugaucacc cccgaggggg acgacaagcc gggcgccgug 1140

ggcaaggugg ucccguucuu cgaggccaag gugguggacc uggacaccgg caagacccug 1200

ggcgugaacc agcggggcga gcugugcgug cgggggccga ugaucaugag cggcuacgug 1260

aacaacccgg aggccaccaa cgcccucauc gacaaggacg gcuggcugca cagcggcgac 1320

aucgccuacu gggacgagga cgagcacuuc uucaucgucg accggcugaa gucgcugauc 1380

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uccgguuugg ucauccaaca agaagaaaug aauaugaaau uccagcaaua agaaaugaac 1800

aaagauugga gcugaagacc uuaagugcuu gcuuuuugcc cgcugaccag auaacauuag 1860

aacuaucugc auuaucuaug cagcaugggg uuuuuauuau uuuuaccuaa agaugucucu 1920

uuuugguaau gacaaacgug uuuuuuaaga aaaaaaaaaa aggccugguu uuucucaaua 1980

caccuuuaac gguuuuuaaa uuguuucaua ucuggucaag uugagauuuu uaagaacuuc 2040

auuuuuaauu uguaauaaag uuuacaacuu gauuuuuuca aaaaagucaa caaacugcaa 2100

gcaccuguua auaaaggucu uaaauaauaa agaucuaaaa aaaaaaaaaa aaaaaaaaaa 2160

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<210> 47
<211> 1914
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - Ndufb8-A64-C30-hSL

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ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

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guuccuagag gcuuaaccau aauaaaaucc cuaauaaagc agaucuaaaa aaaaaaaaaa 1800

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa ugcaucccccc 1860

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<210> 48
<211> 2771
<212> RNA
<213> Artificial Sequence

<220>
<223> 32L4 - PpLuc(GC) - Cntn1-004(V2)-A64-C30-hSL

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ggcgagcagc uccacaaggc caugaagcgg uacgcccugg ugccgggcac gaucgccuuc 180

accgacgccc acaucgaggu cgacaucacc uacgcggagu acuucgagau gagcgugcgc 240

cuggccgagg ccaugaagcg guacggccug aacaccaacc accggaucgu ggugugcucg 300

gagaacagcc ugcaguucuu caugccggug cugggcgccc ucuucaucgg cguggccguc 360

gccccggcga acgacaucua caacgagcgg gagcugcuga acagcauggg gaucagccag 420

ccgaccgugg uguucgugag caagaagggc cugcagaaga uccugaacgu gcagaagaag 480

cugcccauca uccagaagau caucaucaug gacagcaaga ccgacuacca gggcuuccag 540

ucgauguaca cguucgugac cagccaccuc ccgccgggcu ucaacgagua cgacuucguc 600

ccggagagcu ucgaccggga caagaccauc gcccugauca ugaacagcag cggcagcacc 660

ggccugccga aggggguggc ccugccgcac cggaccgccu gcgugcgcuu cucgcacgcc 720

cgggacccca ucuucggcaa ccagaucauc ccggacaccg ccauccugag cguggugccg 780

uuccaccacg gcuucggcau guucacgacc cugggcuacc ucaucugcgg cuuccgggug 840

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agacuuuuuu uuuuuuuaac auauuauacu agauuugacu aacucaaucu uguagcuucu 1800

gcaguucucc ccacccccaa ccuaguucuu agaguauguu uccccuuuug aaacauguaa 1860

acauacuuug ggcauaaaua uuuuuuaaaa uauaacuaua augcuucacu aauaccuuaa 1920

aaaugccuag ugaacuaacu caguacauua uauaauggcc aagugaaagu uuuguguuuu 1980

cauguccugu uuuucuuuga aauuauauag cccagaaauu agcucauuau cugaaaaacg 2040

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auaagcuaaa aggggcauua cuccggcagu cuuuuuuucu uaauccuagu accauacaua 2220

uucuuuggca ugaaagaaug aaaagcauua guaaacaacu gaaguccuac cauggcucug 2280

uaggguuuuu ggaacaauuc cuggaauugg aaagugaaaa uggauagcau gugggggaaa 2340

cccucaucug aguagcaaga uuuuaguaaa gaugacuaag ccauuaacag caugcauuca 2400

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uucugggacu gcuuaaaugu uauuguuuga aaaugccuuc acuuuccccc uuuggucaaa 2580

gagaugugcu uaaaauucuu auuccuucac aauaaauaau uuugauuuuc uuagacaaga 2640

ucuaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700

aaaaaaaugc aucccccccc cccccccccc cccccccccc cccaaaggcu cuuuucagag 2760

ccaccagaau u 2771

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<220>
<223> Homo sapiens SLC38A6 3'-UTR

SLC38A6-001 ENST00000267488

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tccggaagac accctggatg aaaaataaca ttttaataaa aattattaac agaaaagcag 120

aacaaaatgg cagtgggtat ggggaagtaa gagtgtggca gttttaatca aaaaaagaaa 180

caaactcgaa atgctcttaa a 201

<210> 50
<211> 102
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens DECR1 3'-UTR

NM_001359.1

<400> 50
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tcatcttttg actatttcaa gtctaataaa ttcttaatta ac 102

<210> 51
<211> 369
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PIGK 3'-UTR

<400> 51
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tatatatttt taaaaatgtg tttctcttgt atgaattgga aataagtata aggaaactaa 120

atttgaatca actattaatt ttataactta aagaaaaata attgttaatg caactgctta 180

atggcactaa atatattcca gttttgtatt ttgtgtatta taaaagcgaa tgagacagag 240

atcagaatac attgactgtt tttgaaaata gtaatttccc cttatcccct tttcatttgg 300

aaaagaaaca attgtgaaga cattaaattc tcactaacag aagtaacttt ggttaattat 360

tttttgtat 369

<210> 52
<211> 460
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens FAM175A 3'-UTR

FAM175A-009 ENST00000506553

<400> 52
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attgttttta ctatgttgag ctacttgcag taagttcatt tgtttttact atgttcacct 120

gtttgcagta atacacagat aactcttagt gcatttactt cacaaagtac tttttcaaac 180

atcagatgct tttatttcca aacctttttt tcacctttca ctaagttgtt gaggggaagg 240

cttacacaga cacattcttt agaattggaa aagtgagacc aggcacagtg gctcacacct 300

gtaatcccag cacttaggga agacaagtca ggaggattga ttgaagttag gagttagaga 360

ccagcctggg caacgtattg agaccatgtc tattaaaaaa taaaatggaa aagcaagaat 420

agccttattt tcaaaatatg gaaagaaatt tatatgaaaa 460

<210> 53
<211> 505
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PHYH 3'-UTR

PHYH-002 ENST00000396913

<400> 53
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aaatgttttc ttaatgagat gatgtaacct tttctatcac ttgttaaaag cagaaaacat 120

gtatcaggta cttaattgca tagagttagt tttgcagcac aatggtgttg ctttaatgga 180

aaaaaaaaac agtaaaagtg aaatattact gttttaagga aaactaattt agggtggcag 240

ccaataaagg tggttggtgt ctaatttaag tgttaaatca atttctttca ttcagttagc 300

tctttaccca agaagaagtg aatgatttgg agcttagggt atgttttgta tccccttttct 360

gataaaccca ttccctacca attttatgtc ataagagatt tttttccccc aaatctagaa 420

caatgtataa tacattcaca tctagtcaag ggcataggaa cggtgtcatg gagtccaaat 480

aaagtggata ttcctgctcg gacaa 505

<210> 54
<211> 404
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TBC1D19 3'-UTR

TBC1D19-001 ENST00000264866

<400> 54
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gcaaactctg cataaaacca aaatgaaact ttgcatataa gccaataaag atcatgttcc 120

ctcttcagtt aaacctaagt agtttctcac tttttgaaac aataactctg caccaaatat 180

tgcatcgcat gctgctgatt ttcaagagag aagcaataaa cacaacttct gctaaattga 240

gcattatata tataatatta taatatatat ataatcctga cttgtcaatg gcatgtaata 300

atatatgcaa taagaactaa agatactgta ataaacttca agaggtaatg tagcttcttg 360

gataattctt ttatgtcagt ttataaattt atctctagat aatg 404

<210> 55
<211> 353
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TBC1D19 NM_018317.2 3'-UTR

<400> 55
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gcaaactctg cataaaacca aaatgaaact ttgcatataa gccaataaag atcatgttcc 120

ctcttcagtt aaacctaagt agtttctcac tttttgaaac aataactctg caccaaatat 180

tgcatcgcat gctgctgatt ttcaagagag aagcaataaa cacaacttct gctaaattga 240

gcattatata tataatatta taatatatat ataatcctga cttgtcaatg gcatgtaata 300

atatatgcaa taagaactaa agatactgta ataaacttca agaggtaaaa aaa 353

<210> 56
<211> 242
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens PIGB 3'-UTR

PIGB-201 ENST00000539642

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aatattcaga tgctgcttaa atacttcggt aaacactggg taagattcat ggaacttaga 120

aaaaagctgt atgaactgct ttaccaaata tcactactga ggaaatgtat aaaataccac 180

atagtataaa attacatgtt aatacaatgc cagattttaa ataaagacct ttagttttcc 240

tc 242

<210> 57
<211> 157
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ALG6 3'-UTR

ALG6-006 ENST00000263440

<400> 57
ctgtattcct aaacaaattg tttcctaaac aaatgtgaaa atgtgaacag tgctgaaagg 60

ttttgtgaac tttttgctat gtataaatga aattaccatt ttgagaacca tggaaccaca 120

ggaaaggaaa tggtgaaaag tcattgttgt ctacaca 157

<210> 58
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CRYZ 3'-UTR

CRYZ-005 ENST00000370871

<400> 58
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cttaccctat cttttcttta attaacattc gattccatga gcttcttatg tgaaaaaata 120

agatttttct ttagagagca gaagcagaag agtaaaattt attgtatagc tagcaatatt 180

tttttatgcc atctgtctca aatcaaagag tcatcatagt aggaaataac atgttagttg 240

tcatttggca tgagtgtgca ttccagtaat tcttaattga tatttgatta attccatacc 300

tttgattaaa acatgctagt tcaa 324

<210> 59
<211> 510
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens BRP44L 3'-UTR

BRP44L-001 ENST00000360961

<400> 59
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agatttcatt ataaatagcc tccctaagga aaatacactg aatgctattt ttactaacca 120

ttctattttt atagaaatag ctgagagttt ctaaaccaac tctctgctgc cttacaagta 180

ttaaatattt tacttctttc cataaagagt agctcaaaat atgcaattaa tttaataatt 240

tctgatgatg gttttatctg cagtaatatg tatatcatct attagaattt acttaatgaa 300

aaactgaaga gaacaaaatt tgtaaccact agcacttaag tactcctgat tcttaacatt 360

gtctttaatg accacaagac aaccaacagc tggccacgta cttaaaattt tgtccccact 420

gtttaaaaat gttacctgtg tatttccatg cagtgtatat attgagatgc tgtaacttaa 480

tggcaataaa tgatttaaat atttgttaaa 510

<210> 60
<211> 354
<212> DNA
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<220>
<223> Homo sapiens ACADSB 3'-UTR

ACADSB-004

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cttgttggga gtaagtgcct tgcgtgggaa taaacttcca cagcattcga atattttaat 120

gaagccctta gtcagggtcc tggtgttggc ctttttggtt ttctcttttc aggctgttta 180

acttaggcac aggagatcca cttttaaact tgggaaataa gcacctgtat ttttttccaa 240

aactgttttt aaagctgtat acgcatacat atatatattt ttactctgtc ttactctgtc 300

acccaggcta gagtgcagtg gcgcgatctc agctcactgc agccttgacc tcct 354

<210> 61
<211> 539
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TMEM14A 3'-UTR

NM_014051.3

<400> 61
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ttttttgtat ttaaaagata aacttcaata tggaatgcta gaaacacaaa tagcactgtc 120

acctctaata tgaacattag tttgaggtag tttttttcta aagcaaaaat tttaactgtt 180

ttctaattgt caagcactat tttcattaaa agtgtctaat gaatcatgat atactcttcc 240

atttgttgtg tctatttttt atatatttgg tatttttga aaattccaaa tactcatgtc 300

tcaagtaagc ttaaactaca acttgtcaca taaaggaagt cttaagtgga gttcacagaa 360

tgataatgta tctatttgtc atttgtgtta tatttgaaat tattagaaat tatgcttttt 420

ccattttaat tgtattgctg ccagtgctat ttttttcttt aaaaaatttt attcttagca 480

cactgttatg tcctaactga atgtattcag tattcaaata aaagacattt tggttcaaa 539

<210> 62
<211> 292
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens GRAMD1C 3'-UTR

GRAMD1C-005 ENST00000472026

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accagacgaa tgaaggattt tggcatagaa catttctatg ttttttcatt attgagattt 120

ctaatatgaa catttctttc agtaacattt atttgataat tagtttctgc tggccttaat 180

aatccatcct ttcacttctt atagatattt ttaagctgtg aatttcttca gtgaaccatg 240

aaatatatta tagaactgaa tttctctgat acaaaaagaa aatgacacac cc 292

<210> 63
<211> 94
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens C11orf80 3'-UTR

C11orf80-201 ENST00000360962

<400> 63
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ggtttaataa agctgccgcg cgctcaccaa gtcc 94

<210> 64
<211> 266
<212> DNA
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<220>
<223> Homo sapiens ANXA4 3'-UTR

ANXA4-002 ENST00000409920

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ttctacactg ctattatcat tatctcagaa tgcttatttc caattaaaac gcctacagct 120

gcctcctaga atatagactg tctgtattat tattcaccta taattagtca ttatgatgct 180

ttaaagctgt acttgcattt caaagcttat aagatataaa tggagatttt aaagtagaaa 240

taaatatgta ttccatgttt ttaaaa 266

<210> 65
<211> 490

<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TBCK 3'-UTR

TBCK-002 ENST00000361687

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catatccacg ccactctcag acaaaactag atgtccagat tgttgcattt ccgtaaagtt 120

tgtcacgaga catttttaa aatctcataa cccacatgtt cagttatcca tgcaagaaac 180

ttgactctac atgtattgct gaaagaattt tcttaacagt gaaatctgat catatatttt 240

taccacactg ccacataaag cccaagaaat tcagctgaca agacagattt agcattatca 300

agaaatccca tttgccctga aaaagctgtc ctccattgta ctgaacagac agtcctgtcg 360

attgtgttat ttagaaacat acactgaatg tgggctgaaa tcatcatctt tccataatga 420

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ttcacccaaa 490

<210> 66
<211> 320
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens IFI6 3'-UTR

IFI6-001 ENST00000361157

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actttgcctt ttttttttt ttttttttt tgagatgggt tctcactata ttgtccaggc 120

tagagtgcag tggctattca cagatgcgaa catagtacac tgcagcctcc aactcctagc 180

ctcaagtgat cctcctgtct caacctccca agtaggatta caagcatgcg ccgacgatgc 240

ccagaatcca gaactttgtc tatcactctc cccaacaacc tagatgtgaa aacagaataa 300

acttcaccca gaaaacactt 320

<210> 67
<211> 479
<212> DNA
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<220>
<223> Homo sapiens CAMKMT 3'-UTR

(synonym C2orf34) ENST00000378494

<400> 67
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ggctatggac tccacctgtc ctcacccacg ttattcccca gctgccctct ccagctccct 180

ccccgcctct ttttacactc tgcttgttgc tcgtcctgcc ctaaaccttt gtttgtcttt 240

aaatgtgtat aagctgcctg tctgtgactt gaatttgact ggtgaacaaa ctaaatattt 300

ttccctgtaa ttgagacaga atttcttttg atgataccca tccctccttc attttttttt 360

ttttttggt ctttgttctg ttttggtggt ggtagttttt aatcagtaaa cccagcaaat 420

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<210> 68
<211> 476
<212> DNA
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<220>
<223> Homo sapiens ALDH6A1 3'-UTR

NM_005589.2

<400> 68
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tcatttgtca gctttgctca gatcagatcg atgggattgg aatacattgt aactaaaatc 120

ttcctcagga ctattaaccc ccgcaaagtt tctatagga actgcctagt gtaacaatga 180

aaccagattt ctcacttgct cttcatactt ctattttgag gtaactgttg taactatgaa 240

atgcttatct gaaagtagtg cttaaacctg atttctaaaa attatcccat tttctgatga 300

tttgaagggg agaaaagcca gtgtatgtaa agaaaatgtt ccagccaggc gcggtggctc 360

acgcctgtaa ttccatcatt ttgggaggcc acagtgggca gattgcttga gcccaggagt 420

tgaagaacgt ggcgaaaccc cgtatctatt atttaaaaaa attgaaaaag taaaaa 476

<210> 69
<211> 567
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<213> Artificial Sequence

<220>
<223> Homo sapiens AGTPBP1 3'-UTR

AGTPBP1-004 ENST00000357081

<400> 69
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caggaagctt gagagaaatg agtttataca gagctgactc aaaaagacaa aaagtaactt 120

gggccagttt ggtttcaaga taataaatgt gttattaatt aatgataaaa ttggcgcttg 180

ttttattttc gatattcaat gcactttatg tagcattgaa tgatcaaata ttggatttac 240

ctttaaaaaa aaaacctgag tatcattgca tgaattttta tctccctatg gttatatcct 300

gcatcaagtg gataattttg aagtgtgttc agaatataaa attgaaattt tagagttgtt 360

gaaaatcctg acttgttgaa aactaatata tatgtacatg gatttctata gatgtgtttg 420

tttagaagtg ggtagatatt gcagataaga ctgttcttca gaatcatgtt aactattggg 480

ttgtgactga agtagtccag ggtttgcctt gaaaccatta cattctacat ttaccaaatt 540

aaacaaataa aaactgtatt aaatgtt 567

<210> 70
<211> 169
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CCDC53 3'-UTR

CCDC53-001 ENST00000240079

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attgagcctg aactctctta gtcataaaaa catcaaatgg ccacatgtcc actaccaagc 120

ttcttctatg ttaaaaaaat aataataaag cagttttaac ctgccagta 169

<210> 71
<211> 194
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens LRRC28 3'-UTR

LRRC28-002 ENST00000331450

<400> 71
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gcacactctt ccatcctgtc ctgtccaatg cgggggcact gcagaactct ctagaaatgt 120

catgattgag cttcagagct aaaatgcctt cacccttccc ccaagttgga atatatcctc 180

ccccaaatta agga 194

<210> 72
<211> 120
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<213> Artificial Sequence

<220>
<223> Homo sapiens CCDC109B 3'-UTR

NM_017918.4

<400> 72
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tttttgagtc ccatggttca ttttgattgt ttaatctttg ttattaaatt cttgtaaaac 120

<210> 73
<211> 426
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PUS10 3'-UTR

PUS10-001 ENST00000316752

<400> 73
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acatgccgta aaatggctgt ttacccacca taacggtgtc ttgaaaacta tttggatcat 120

gttgatctat ataattgtta atttgttgta acatctcagg atctatatat gtgtatattt 180

tgtgttaaat tgttccaagg atgtcttagg atttttctca ttccctcttt cacccccaca 240

aaccaaacta tgaataatga aataattctc cttaattctt tcatttagag aggtgcacaa 300

acaggacaca ttctctgtta acctaagaag ctgtaatttc agcaagattt ccctccacaa 360

gagatatacc acctttaaaa tcatgttcta atttttgtaa attatctgaa taaaagttat 420

atctag 426

<210> 74
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CCDC104 3'-UTR

CCDC104-002 ENST00000339012

<400> 74
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ccttacactg a 71

<210> 75
<211> 125
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CASP1 3'-UTR

CASP1-007 ENST00000527979

<400> 75
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tttggaatta tgtctgctga ataataaact tttttgaaat aataaatctg gtagaaaaat 120

gaaaa 125

<210> 76
<211> 174
<212> DNA
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<220>
<223> Homo sapiens SNX14 3'-UTR

SNX14-007 ENST00000513865

<400> 76
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tttacttttt tgggtatatt cttatatata ttatgtacat cgctgtctga aattttagtt 120

atttttgtt tttaataaag actaacacaa acttaatgat taaaagtgat tgag 174

<210> 77
<211> 237
<212> DNA
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<220>
<223> Homo sapiens SKAP2 3'-UTR

SKAP2-201 (part of SKAP2.001 ENST00000345317)

<400> 77
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atgaaagcac gagtgacagc tcctaacctc tccttgtttt attaaacatt acttatcttt 120

gactgttatt ttatgcagtc gctcattaaa atattcctct gatgtgaaat taaatgaagg 180

atattaatgt aaattagatg caaccagtta agttatacct gttgctattt tgcaaag 237

<210> 78
<211> 362
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens NDUFB6 3'-UTR

NM_182739.2

<400> 78
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actgaatttt ctggaaaagt aactttaata aagtttaatc tcagaaattg tcatatctgt 120

tttcaagcat tgtacaattt gagactgagt aatttaacaa taagtaaaaa gtggacatgc 180

taaacaaata tgagagacta cctacttttt ctggtcattc ttgacttgga aaacggtatg 240

gaaaagtatt tagttacatg tttgtttgtt tttttcttac acagtactta cactaatttg 300

gtatcagggt atgcaacagt gaaatatcac aataaacaaa tgtaagaaca aaaaaaaaaa 360

aa 362

<210> 79
<211> 549
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens EFHA1 3'-UTR

EFHA1-001 ENST00000382374

<400> 79
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gaagtacttg ctatttatct tcttaagtct tcattgatat tctgtgtgaa ataagcatgt 120

cttgtacttg ctttctgatt cataatttta ttaaagaact tagtagaaag aaaagtaagt 180

ataaaaatag atattggatt ctgtcagaag gcctagattt gaaataatgt tttgtacttc 240

ggtaagatgg aaaacttagt gattcactga tttcttagac actctaatat gatatgcttt 300

ctggaaggat aaaacaaata catatgggaa aaagtacttg agaccaaggc cagcatcaat 360

tccagacatc ttcatgttcc taataggcta aatgaagtta aaaacttatt tcagattttt 420

ctcatctgta ccttatatct cataaattta ttgcatattt tatgtcagta gcttagctgt 480

ttattgtctt taaaataaca tgtaaacttc aatgttctat ctggaagcag aataaaatat 540

ttacataga 549

<210> 80
<211> 288
<212> DNA
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<220>
<223> Homo sapiens BCKDHB 3'-UTR

BCKDHB-005 ENST00000356489

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ttatatttcc tccgacttac ctctttttga aaagagagtt tttattaagt gaaccatcac 120

gatattggct gaaaagttct acattctatt attgtattgt aacacacatg tattgatgat 180

tttcattaag agtttcagat taactttgaa aaatattcca catggtaatc ttataaattc 240

tgtttaatta catctgtaaa tattatgtgt gtgatagtat tcaataaa 288

<210> 81
<211> 414
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens BCKDHB 3'-UTR

NM_001164783.1

<400> 81
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gggagcaggg ggacctgaca gcacaccact gtcttcccca gtcagctccc tctaaaatac 120

tcagcggcca gggcggctgc cactcttcac ccctgctcct cccggctgtt acattgtcag 180

gggacagcat ctgcagcagt tgctgaggct ccgtcagccc cctcttcacc tgttgttaca 240

gtgccttctc ccaggggctg ggtgagggca cattcaggac tagaagcccc tctgggcatg 300

gggtggacat ggcaggtcag cctgtggaac ttgcgcaggt gcgagtggcc agcagaggtc 360

acgaataaac tgcatctctg cgcctggctc tctaccaaaa aaaaaaaaaa aaaa 414

<210> 82
<211> 414
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens BBS2 3'-UTR

NM_031885.3

<400> 82
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gtttgctttg gatcacaccc tggtgaaccc cgggtgctaa gaatgaaaat aaccttggtg 120

agttgtacaa attaaagaca aagaactaca tgtgaagata gacttgcttt ctatttttaa 180

atcagtagta gtactgttgc tgaataatac taggttttta tggaatagga tgaatgcttt 240

tgaagtatta gggcttcaga gtccaatttt gcttatttat ggtatataaa tacatatttt 300

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atgtaaagat gttaaacttt gtgttgattg attataaaat caccaccaaa tcag 414

<210> 83
<211> 409
<212> DNA
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<220>
<223> Homo sapiens LMBRD1 3'UTR

NM_018368.3

<400> 83
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tattaaacta acattaggat ttgctaacta gctttcatca aaaatgggag catggctata 120

agacaactat attttattat atgttttctg aagtaacatt gtatcataga ttaacatttt 180

aaattaccat aatcatgcta tgtaaatata agactactgg ctttgtgagg gaatgtttgt 240

gcaaaatttt ttcctctaat gtataatagt gttaaattga ttaaaaatct tccagaatta 300

atattccctt ttgtcacttt ttgaaaacat aataaatcat ctgtatctgt gccttaggtt 360

ctccagagtg atgtggaatt ttaaagtgtc tctctctgat tgcctccaa 409

<210> 84
<211> 466
<212> DNA
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<220>
<223> Homo sapiens ITGA6 3'-UTR

ITGA6-003 ENST00000409532

<400> 84
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tccccgatac catgctgtaa ggatccggaa agaagagcga gagatcaaag atgaaaagta 120

tattgataac cttgaaaaaa aacagtggat cacaaagtgg aacgaaaatg aaagctactc 180

atagcggggg cctaaaaaaa aaaagcttca cagtacccaa actgcttttt ccaactcaga 240

aattcaattt ggatttaaaa gcctgctcaa tccctgagga ctgatttcag agtgactaca 300

cacagtacga acctacagtt ttaactgtgg atattgttac gtagcctaag gctcctgttt 360

tgcacagcca aatttaaaac tgttggaatg gatttttctt taactgccgt aatttaactt 420

tctgggttgc ctttattttt ggcgtggctg acttacatca tgtgtt 466

<210> 85
<211> 285
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens HERC5 3'-UTR

HERC5-001 ENST00000264350

<400> 85
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ttgttgtttc tctactttgt tttgttttag gcttttagca gcctgaagcc atggtttttc 120

atttctgtct ctagtgataa gcaggaaaga gggatgaaga agagggttta ctggccggtt 180

agaacccgtg actgtattct ctcccttgga tacccctatg cctacatcat attccttacc 240

tcttttggga aatatttttc aaaaataaaa taaccgaaaa attaa 285

<210> 86
<211> 515
<212> DNA
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<220>
<223> Homo sapiens HADHB 3'-UTR

HADHB-001 ENST00000317799

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caatgcatta ctaaatgaca tttgtagttc ctagctcctc ttaggaaaac agttcttgtg 120

gccttctatt aaatagtttg cacttaagcc ttgccagtgt tctgagcttt tcaataatca 180

gtttactgct ctttcaggga tttctaagcc accagaatct cacatgagat gtgtgggtgg 240

ttgtttttgg tctctgttgt cactaaagac taaatgaggg tttgcagttg ggaaagaggt 300

caactgagat ttggaaatca tctttgtaat atttgcaaat tatacttgtt cttatctgtg 360

tcctaaagat gtgttctcta taaaatacaa accaacgtgc ctaattaatt atggaaaaat 420

aattcagaat ctaaacacca ctgaaaactt ataaaaaatg tttagataca taaatatggt 480

ggtcagcgtt aataaagtgg agaaatattg gagaa 515

<210> 87
<211> 116
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ANAPC4 3'-UTR

ANAPC4-001 ENST00000315368

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atgtcttgga ccacctttgt gtaacaaaga aataaacagt aaattttatt ttttca 116

<210> 88
<211> 154
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PCCB 3'-UTR

NM_000532.4

<400> 88
acaaatcaaa ggaaaagaaa ccaagaactg aattactgtc tgcccattca catcccattc 60

ctgccttttg caatcatgaa acctgggaat ccaaatagtt ggataactta gaataactaa 120

gtttattaaa ttctagaaag atctcaaaaa aaaa 154

<210> 89
<211> 90
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ABCB7 3'-UTR

ABCB7-001 ENST00000253577

<400> 89
gtcacataag acattttctt tttttgttgt tttggactac atatttgcac tgaagcagaa 60

ttgttttatt aaaaaaatca tacattccca 90

<210> 90
<211> 318
<212> DNA
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<220>
<223> Homo sapiens PGCP 3'-UTR

CPQ-001 ENST00000220763

<400> 90
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gaaaactcct cttcacataa caatttcatc caattcatct tcaaagcaca actctatttc 120

atgctttctg ttattatctt tcttgatact ttccaaattc tctgattcta gaaaaaggaa 180

tcattctccc ctccctccca ccacatagaa tcaacatatg gtagggatta cagtgggggc 240

atttctttat atcacctctt aaaaacattg tttccacttt aaaagtaaac acttaataaa 300

tttttggaag atctctga 318

<210> 91
<211> 133
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens NFU1 3'-UTR

NM_001002755.2

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ttattattaa tatgctgagg aacttgaaga ttaataaaat atgctcttca gagaatgata 120

tataaatatt gca 133

<210> 92
<211> 246
<212> DNA
<213> Artificial Sequence

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<223> Homo sapiens OMA1 3'-UTR

OMA1-001 ENST00000371226

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acttttaaa aaatgatgtt tgaagtgaaa aaaaaaagga tattcagggt caaatcatgt 120

acattacaga tattatctaa attcttctag aatttatttt tcatgaaata ttgatgtatt 180

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atttta 246

<210> 93
<211> 423
<212> DNA
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<220>
<223> Homo sapiens HHLA3 3'-UTR

NM_001036646.1

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tcatatcccc tgtgacctgc atgtatacat ccagatggcc tgaagcaagt gaagaatcac 120

aaaagaagtg aaaagggccg gttcctgcct taactgatga cattccacca ttgtgatttg 180

ttcctgcccc accttaactg agcgattaac ctgtgaactt ccttctcctg gctcagaagc 240

ttccccactg agcaccttgt gacccccgcc cctgcctgcc atagaacaac ccccttttgat 300

tgtaattttc ctttacctac ccaaatccta taaaacggcc ccacccctat ctcccttcgc 360

tgacactctc tttggactca gcctgcctgc acctaggtga ttaaaaagct ttattgctca 420

cgc 423

<210> 94
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<212> DNA
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<220>

<223> Homo sapiens HHLA3 3'-UTR

NM_001031693.2

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ccttaactga gcgattaacc tgtgaacttc cttctcctgg ctcagaagct tccccactga 120

gcaccttgtg acccccgccc ctgcctgcca tagaacaacc ccctttgatt gtaattttcc 180

tttacctacc caaatcctat aaaacggccc cacccctatc tcccttcgct gacactctct 240

ttggactcag cctgcctgca cctaggtgat taaaaagctt tattgctcac gc 292

<210> 95
<211> 342
<212> DNA
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<220>
<223> Homo sapiens ACAA2 3'-UTR

NM_006111.2

<400> 95
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gtttgatcaa gccatggtga cacaaaaatg cattgatcat gaataggagc ccatgctaga 180

agtacattct ctcagatttg aaccagtgaa atatgatgta tttctgagct aaaactcaac 240

tatagaagac attaaaagaa atcgtattct tgccaagtaa ccaccacttc tgccttagat 300

aatatgatta taaggaaatc aaataaatgt tgccttaact tc 342

<210> 96
<211> 446
<212> DNA
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<220>
<223> Homo sapiens GSTM4 3'-UTR

GSTM4-001 ENST00000369836

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gcagcgcagc tggactctgc atcccagcac ctgcctcctc gttcctttct cctgtttatt 120

cccatcttta cccccaagac tttattgggc ctcttcactt cccctaaacc cctgtcccat 180

gcaggccctt tgaagcctca gctacccact ttccttcatg aacatccccc tcccaacact 240

acccttccct gcactaaagc cagcctgacc ttccttcctg ttagtggttg tatctgcttt 300

gaagggccta cctggccccc cgcctgtgga gctcagccct gagctgtccc cgtgttgcat 360

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<212> DNA
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<220>
<223> Homo sapiens GSTM4 3'-UTR

GSTM4-003 ENST00000326729

<400> 97
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attgtgcttg tgagggtgtt tccagaagag atttgccttt gaatcagaag acagcaaaga 120

tttccttcag caatgaagga ggcatccacc aaactgtcag ggcccagaga gaagaaaaag 180

acaggaaggg tgaatttgac ctctctgact gggacatcca tctctgccta tcctgggacc 240

tccacactcc tggttctctg gccttcagac ttgatcaggg actaacacca tcgcctccca 300

cccccacctt tgttctgagg cctttagcct ctgaatgata ccactggctt tcctgcttct 360

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cataacagat agataaattt ataaataaac acacaaattt cctac 465

<210> 98
<211> 274
<212> DNA
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<223> Homo sapiens ALG8 3'-UTR

NM_001007027.2

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ctgcttggcc tggggcctct ggaagtctgc tgtgaatttg tattcccttt cacctcctgg 120

aaggtgaagt acccccttcat ccctttgtta ctaacctcag tgtattgtgc agtaggcatc 180

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aagaaacaat gaataaagga actgcttaga tatg 274

<210> 99
<211> 122
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens C11orf74 3'UTR

<400> 99
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tagaataaaa gataaaccta ctataattcc ctttgtggaa atttaaaaaa aaaaaaaaaa 120

aa 122

<210> 100
<211> 133

<212> DNA
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<220>
<223> Mus musculus Ndufa1 3'-UTR

Ndufa1-001 ENSMUST00000016571

<400> 100
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gaaggctatg cagcatatta tatactatgc gcatgttatg aaatgcataa taaaaaattt 120

taaaaaatct aaa 133

<210> 101
<211> 155
<212> DNA
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<223> Mus musculus Atp5e 3'-UTR

NM_025983

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<210> 102
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NM_010360

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NM_025650

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IFi27I2a-001 ENSMUST00000055071; NM_029803

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NM_007621

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ccacccccat gttactgtcg atcccacaac cactccaggc gcagaccttg ttctctttgt 180

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Atp5l-201 ENSMUST00000043675

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1110008P14Rik-001 ENSMUST00000048792

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NM_007748

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ttaaactca 189

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NM_024171

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NM_025946

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ccccagtgat tctgaaaaac ccctcttccc ttcagcttgc ttagatgttc caaatttagt 180

aagcttaagg cggcctacag aagaaaaaga aaaaaaaggc cacaaaagtt ccctctcact 240

ttcagtaaat aaaataaaag cagcaacaga aataaagaaa taaatgaaat tcaaaatgaa 300

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cctgtgcttt ttggttaaaa aaaaaaaaaa aaaaaa 96

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actggttttt ttttttttt taatataata aaaacttatc tggcatcagc ctcatacct 119

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ggatgaagct caatgcagac cgatcacgcg tccagatgtg caggatgctg ccttcaacct 240

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Prdx4-001, NM_016764

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NM_025363

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Ndufa13-201 ENSMUST00000110167

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taccttctgt taatcatctt tccttaatac tttcttatct gtttctagaa taaatcatga 180

tccctactgc accaccttga aaatgttgtt tccagtttta aaataagcaa taaatatttg 240

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ggaactgtct gaaccaactg ggtactgatg tctctgggaa tgccagcccg tgtccttgtt 180

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1810027O10Rik-001 ENSMUST00000094065

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gaagggatgg atcataggat tctgatttta tgtgaaattt tgtctaattc attaaagcag 180

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aaaaaaaaaa aaaaa 135

<210> 148
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ggacctggcg tgcatccctg ccggaggaag gtccagaggc ctgtggccct gggctcgagc 180

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caaagtttgg ggtgggttct agagaagagg agtattggga ggggtgggta ttgtcaatgt 180

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BC_030629

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Anapc5-201 ENSMUST00000086216

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gtcaagaatt gggagggtgg gtgttgggcg atttcgattt ttggcagttt taagctggta 180

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aaagctttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 278

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ttcccaactt tctgcagaag atggtccttg cccttgtcct gaagagtagt aatggttctt 240

gaaaaagatt tcaaataaag cctgcacata aaagacaggt attttattct tttaataaga 300

aacttattac aaaaacaagg tgtaaaaagt ccgcttacaa aaatcaaata aacatgactt 360

gtatttcaaa aaaaaaaaaa aaaaaaa 387

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Tomm6-002 ENSMUST00000113301

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cctacctgag tggcagctga agttgactcc ctctccttgc ctgaaccccc ccccactgcc 180

cccccatccc ccagtgtcgg ctgagatgtt gcctctgcac ggttctgtgt gcagttccca 240

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gaaaaagatt tcaaataaag cctgcacata aaa 273

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ttgaagccaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 158

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Hrsp12-001 ENSMUST00000022946

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ctaatttcac ttatgttgct gggtgtgaga gaagaggtgc acagctactg agatgggaag 240

cagaaggaaa gatgggctgt tgtacatgag aaatagtaag gagcacatct acttaaatca 300

tattaatttg ctcatgtgaa atacttagtt cttatgttag atataagaaa ctaaattgaa 360

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cctcacagcc cttttctgca atctgaggtc tgtcctgaac tcaggctccc tagagttacc 300

ccaatggtca acactatctt agtgccagcc ctccctagag ataccctgat ggtcaatact 360

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ccaggcatgt ttgagtttca gttggagctg caggctcagc ccatggcggc tcacctgtcc 240

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gaaggaaact aaagacccgt cagtgccttt ctttctgccc tgctggtgtg ccaatcaggg 240

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gaagaaataa gcacagagct gttttaggag cccactgggt cattggccat ataggttatg 360

cttactgccc tctacctcgt ggttatattt ggaattgcca ttagctccct tctgcttaga 420

gactggactg tcaccaaacc caaggggata gtgatcctgt aatgatcctg tgtgaactag 480

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ctgctcctcc gtcggttctc aatgaaaaag tcctgtcttt gcaacctgaa ttagacttgt 180

gttttctcaa aaaaaaaaaa aaaaa 205

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NM_031248 (Lamtor2)

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ggccgatttt gtaactgatt tgcgcttcca ccgctgcccc ctcccgctcc caaaatccca 180

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aaagcttatt acacttg 257

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Trappc6a-001 ENSMUST00000002112

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gtcacatgtg cttcagacaa gggaatgaaa gggccgggag ggtcccggga ggtgggacca 180

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Ldhb-001 ENSMUST00000032373

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Nme2-001 ENSMUST00000021217

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<223> Mus musculus Ndufa2 3'-UTR

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Serf1-003 ENSMUST00000142155

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taaactttac tcttcagcct atcttaatgt gatgttttaa gaccatcaaa aaataaagta 180

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<210> 196
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<220>
<223> Mus musculus Oaz1 3'-UTR

Oaz1-001 ENSMUST00000180036

<400> 196
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tgcagaataa acgctcactc cattagcggg gtgcttcttc gagctgaatg ctgtgtttgt 120

cacactcaag tgttggcttt aattctaaat aaaggtttct attttacttt tttattgctg 180

tttaagatgg tcaggtgacc tatgctatag cagtctcctt tgaagtctgg aaaaatagtg 240

tcacctcccc tggctcaaat ccaataaagt gatctcgttc attggc 286

<210> 197
<211> 418
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus Ybx1 3'-UTR

Ybx1-001 ENSMUST00000079644

<400> 197
atgccggctt accatctcta ccatcatccg gtttggtcat ccaacaagaa gaaatgaata 60

tgaaattcca gcaataagaa atgaacaaag attggagctg aagaccttaa gtgcttgctt 120

tttgccctct gaccagataa cattagaact atctgcatta tctatgcagc atggggtttt 180

tattattttt acctaaagat gtctcttttt ggtaatgaca aacgtgtttt ttaagaaaaa 240

aaaaaaaaag gcctggtttt tctcaataca cctttaacgg tttttaaatt gtttcatatc 300

tggtcaagtt gagattttta agaacttcat ttttaatttg taataaagtt tacaacttga 360

ttttttcaaa aaagtcaaca aactgcaagc acctgttaat aaaggtctta aataataa 418

<210> 198
<211> 421
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus Ybx1(v2) 3'-UTR

with mutation T128bpG and deletion del236-237bp

<400> 198
tttttatgcc ggcttaccat ctctaccatc atccggtttg gtcatccaac aagaagaaat 60

gaatatgaaa ttccagcaat aagaaatgaa caaagattgg agctgaagac cttaagtgct 120

tgctttttgc ccgctgacca gataacatta gaactatctg cattatctat gcagcatggg 180

gtttttatta tttttaccta aagatgtctc tttttggtaa tgacaaacgt gttttttaag 240

aaaaaaaaaa aaggcctggt ttttctcaat acacctttaa cggtttttaa attgtttcat 300

atctggtcaa gttgagattt ttaagaactt cattttaat ttgtaataaa gtttacaact 360

tgatttttc aaaaaagtca acaaactgca agcacctgtt aataaaggtc ttaaataata 420

a 421

<210> 199
<211> 798
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus Sepp1 3'-UTR

NM_009155

<400> 199
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gaatgtttac agcccattta attaatcagt gaactaaaag tcatagaaat tggatttgtg 120

caaatgtaga gaaatctacc atattggctt ccaaaattta aaaattttat gccacagaac 180

atttcatcca aatcagattt gtacaatagg gcacctgaaa agtgactgca gcctttggtt 240

aatatgtctt tctttttcct ttttccagtg ttctagttac attaatgaga acagaaacat 300

aaactatgac ctaggggttt ctgttggata gcttgtaatt aagaacggag aaagaacaac 360

aaagacatat tttccagttt tttttttctt tacttaaact ctgaaaacaa cagaaacttt 420

gtcttcctac tcttacattc taaaccgatg aaatctttaa cagattacac tttaaatatc 480

tactcatcat tttctctctc agagtcctag cttgagttgc actgcatgta tctgtgcatc 540

ttgttctctt catttaatgc tgtactgttc tgctgagctc tgagggacta tcttgagaga 600

tgtaatggaa ggaaagcgtg gtgttaatct gcgtactgct taagacagta tttccataat 660

caatgatggt ttcatagaga aactaagtcc tatgaacctg acctctttta tggctaatac 720

gactaagcaa gaatggagta cagaattaag tggctacagt acacacttat caaaataaat 780

gcaattttaa aacctttc 798

<210> 200
<211> 390
<212> DNA
<213> Artificial Sequence

<220>
<223> Mus musculus Gaa 3'-UTR

Gaa-001 ENSMUST00000106259

<400> 200
gagagtccgt cgtttacaga ggcctccagg gaggcagagg gagcttgagc tggctctggc 60

tggtggctcc tgtaaggacc tgcgtcctgc tctcctgaca catctttgag cttttcccac 120

cgtgttactg catgcgcccc tgaagctctg tgttcttagg agagtgaggc tcgcctcacc 180

tgccccaccc cagctgtctg tccctcacct ggcactagag aatgtggagc tcggcgtggg 240

gacatcgtgt ctgcaccaac atcaggctgt gcagccactg cagccgcaac cctgcagaga 300

cagagctggt gccttcacca ggttcccaag actcgagaaa cttactgtga agtgtactta 360

cttttaataa aaaggatatt gtttggaagc 390

<210> 201
<211> 481
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ACTR10 3'-UTR

ACTR10-002 ENST00000254286

<400> 201
aagtttgatt aaaaatcaac cttgcttcat atcaaatatt taaccaatta taagcaaatt 60

gtacaaagta tgtaggatgt tttgttatag aggactatag tggaagtgaa agcattctgt 120

gtttactctt tgcattaata tataattctt ttgactttgt ttctcttgtg tagtggtaaa 180

atggtagctg gtgcttattg agatttgctg tatttatatc aataaagtat agtaaagcag 240

tttgattttg gaagtttgtt atgtggcttt ttttttttt ttttttttga gacggagtct 300

cgctctgtca cttaggctgg agtgcagtgg cacaatctct actcattgca agctccgcct 360

cccgggttta cgccattctg tctcagcctc ctgagtagct gggactatag gcatacgcca 420

ccccgcccgg ctaatttttt gtatatttag tagagacggg gtttcaccat gttagccagg 480

a 481

<210> 202
<211> 347
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PIGF 3'-UTR

NM_173074

<400> 202
gtaacttaat cctgacaacc gtagtgcaag gtatggccca tctcctgtac gcttggagcg 60

acctttggct acgtggctgg ccttgttatt tcaccactct ggatatactg gaatagaaag 120

caacttacat acaagaacaa ttaactggag caaagggaga tatttctttg tgcagattct 180

gtaagggctg ggcagaaatg tgtatggtca aagccaagca gttccattta cagctctgtt 240

ttttacgtag ttacaacatg atgtgattgt agctttttaa actatgaaac ccctgagaga 300

ttgtaccttc tagttgaaat aaagtattta taatagattg tggcttc 347

<210> 203
<211> 233
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PIGF 3'-UTR

NM_002643.3

<400> 203
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tggtcaaagc caagcagttc catttacagc tctgtttttt acgtagttac aacatgatgt 120

gattgtagct ttttaaacta tgaaacccct gagagattgt accttctagt tgaaataaag 180

tatttataat agattgtggc ttcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 233

<210> 204
<211> 116
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens MGST3 3'-UTR

MGST3-001 ENST00000367889

<400> 204
agaattatag gggtttaaaa actctcattc attttaaatg acttaccttt atttccagtt 60

acatttttt tctaaatata ataaaaactt acctggcatc agcctcatac ctaaaa 116

<210> 205
<211> 913
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens SCP2 3'-UTR

NM_001193599

<400> 205
agaactccct ttggctactt ttgaaaatca agatgagata tatagatata tatccataca 60

ttttattgtc agaatttaga ctgaaactac acattggcaa atagcgtggg atagatttgt 120

ttcttaatgg gtgtgaccaa tcctgttttt cctatgctct gggtgaatag agcctgatgg 180

tatactactg ctttgcggaa ttgcatacaa ctgtgcatta caaagttaat atggtaatta 240

tggtctgggg taaaattgag tttcagaata aaattaggaa cagtaaaatc caaagaacta 300

tgtaaacaaa aaagcttttg ttttgcttac aaagtatatt taaggattat tctgctgaag 360

attcagttta agagttttcc ttgggagaac taagtaagaa acacaatgcc aacagctggc 420

cagtaattag tgttgtgcac ttcatgtcat taatcaattt ctcaatagtt cttaaaatta 480

gtgagattaa aaatctaaaa attttgcatt tcatgctatc agaaacagta ttttcttccc 540

aaatcaaaat aaaagaaata tgatcagagc ttgaacacag gcttattttt aaaataaaaa 600

tatttttaac atgggtttcc ttattgaaaa atcagtgtat tagtcataaa acaccatcat 660

taagaataat tgaacaataa agtttgcttt cagatgcagt tttcaaatta taatctcatt 720

tcaatttata acgttctcag tcctttgtta taattttcct ttttcatgta agtttaatta 780

tctgcattta tctttttttcc tagtttttct aatactaatg ttatttctta aaattcagtg 840

agatatagga taaaataatg ctttgagaag aatgtttaat agaaaattaa aataactttt 900

tctggcctct ctt 913

<210> 206
<211> 409
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens SCP2 3'-UTR

SCP2-015 ENST00000435345

<400> 206
agaactccct ttggctactt ttgaaaatca agatgagata tatagatata tatccataca 60

ttttattgtc agaatttaga ctgaaactac acattggcaa atagcgtggg atagatttgt 120

ttcttaatgg gtgtgaccaa tcctgttttt cctatgctct gggtgaatag agcctgatgg 180

tatactactg ctttgcggaa ttgcatacaa ctgtgcatta caaagttaat atggtaatta 240

tggtctgggg taaaattgag tttcagaata aaattaggaa cagtaaaatc caaagaacta 300

tgtaaacaaa aaagcttttg ttttgcttac aaagtatatt taaggattat tctgctgaag 360

attcagttta agagttttcc ttgggagaac taagtaagaa acacaatgc 409

<210> 207
<211> 591
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens HPRT1 3'-UTR

HPRT1-001 ENST00000298556

<400> 207
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tatcaatgtt ctagttctgt ggccatctgc ttagtagagc tttttgcatg tatcttctaa 120

gaattttatc tgttttgtac tttagaaatg tcagttgctg cattcctaaa ctgtttattt 180

gcactatgag cctatagact atcagttccc tttgggcgga ttgttgttta acttgtaaat 240

gaaaaaattc tcttaaacca cagcactatt gagtgaaaca ttgaactcat atctgtaaga 300

aataaagaga agatatatta gtttttaat tggtatttta atttttatat atgcaggaaa 360

gaatagaagt gattgaatat tgttaattat accaccgtgt gttagaaaag taagaagcag 420

tcaattttca catcaaagac agcatctaag aagttttgtt ctgtcctgga attattttag 480

tagtgtttca gtaatgttga ctgtattttc caacttgttc aaattattac cagtgaatct 540

ttgtcagcag ttccctttta aatgcaaatc aataaattcc caaaaattta a 591

<210> 208
<211> 283
<212> DNA
<213> Artificial Sequence

<220>
<223> ACSF2

Homo sapiens

<400> 208
ataaagcagc aggcctgtcc tggccggttg gcttgactct ctcctgtcag aatgcaacct 60

ggctttatgc acctagatgt ccccagcacc cagttctgag ccaggcacat caaatgtcaa 120

ggaattgact gaacgaacta agagctcctg gatgggtccg ggaactcgcc tgggcacaag 180

gtgccaaaag gcaggcagcc tgcccaggcc ctccctcctg tccatccccc acattcccct 240

gtctgtcctt gtgatttggc ataaagagct tctgttttct ttg 283

<210> 209
<211> 555
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens VPS13A 3'-UTR

NM_033305

<400> 209
aattcatatg ttctttattt tacttggaat gtttcattaa catgttttgt atgacttata 60

ccataatgcc catatgtcca tttataggga ggtaaaacac attttctttt aaaatgtttt 120

cctacacatt ttcataaagc aaaataattg tattatttaa gcacagaaaa aaatgtatct 180

tacatccaaa gtagggaggg catccaacat attatagatt tgcttttata tattttatag 240

ctttgtattg catagtttgt ctttaagagt tcaagttaga cttaaatata attttgatgt 300

tcactggttt tattttaaat tgccttctta tttgttagca aaatgccttt ttttaatggt 360

ctctgtaaat tttctgggct ttaatgtaat gccactgtgt aaaaaaaaag gaagaaaata 420

gtaatagcca tttaatgttt tatatttatc attttaaaga tatttttgtc aaatttcttt 480

taataataat aaacatatgt aatctaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540

aaaaaaaaaa aaaaa 555

<210> 210
<211> 724
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CTH 3'-UTR

NM_001190463.1

<400> 210
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aatggaccaa caatgagcct ttgcaaaatt ttcaagcgga aattttaagg cacctcatta 120

tctttcataa ctgtaatttt cttagggatc atctctgtta aaaagttttc tgtatgtcat 180

gttataatta caggtcaatt ctgttaatat ctttttgtta attttgctct atgtttgcct 240

ctgaaggagg tgagatttgt gctactttgg gagattatgt tctttttca tgtctaagat 300

ttattttgat catgtttata atataatggt aattcatttt tgatgttttg tgaagaattt 360

aaatttaaac gaatgttctt aaatcaagtg tgatttttt gcatatcatt gaaaagaaca 420

ttaaaagcaa tggtttacac ttagttacca taagccgaaa atcaaatact tgaaaagttt 480

actgtgaaat tctactgatt taagactata cttaatattt ttaaaaaaat aaatcagctg 540

ggcgcggtgg ctcacgcatg taatgccagc acttttggag gataaggcgg gcggatcacg 600

aggtcaggag attgagacca tcctggctag cgcagtgaaa cccccatctc tactaaaaat 660

gcaaaaaaaa ttagacggac gtggtggcgg gtgcctgtag tcccagctac ttgggaggct 720

gagg 724

<210> 211
<211> 443
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CTH 3'-UTR

CTH-001 ENST00000370938

<400> 211
tattccagag ctgctattag aagctgcttc ctgtgaagat caaatcttcc tgagtaatta 60

aatggaccaa caatgagcct ttgcaaaatt ttcaagcgga aattttaagg cacctcatta 120

tctttcataa ctgtaatttt cttagggatc atctctgtta aaaagttttc tgtatgtcat 180

gttataatta caggtcaatt ctgttaatat ctttttgtta attttgctct atgtttgcct 240

ctgaaggagg tgagatttgt gctactttgg gagattatgt tctttttca tgtctaagat 300

ttattttgat catgtttata atataatggt aattcatttt tgatgttttg tgaagaattt 360

aaatttaaac gaatgttctt aaatcaagtg tgatttttt gcatatcatt gaaaagaaca 420

ttaaaagcaa tggtttacac tta 443

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

<220>
<223> Homo sapiens CTH 3'-UTR

CTH-002 ENST00000346806

<400> 212
tattccagag ctgctattag aagctgcttc ctgtgaagat caaatcttcc tgagtaatta 60

aatggaccaa caatgag 77

<210> 213
<211> 286
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens NXT2 3'-UTR

NXT2-004 ENST00000372107

<400> 213
aggggcaaaa gtccattctc atttggtcca ttagttccag caattgaaat ttatgtgaat 60

tattttgatt gtagaagcac tataatatgt gctgaaacta aatttcttta atattttcta 120

ttcctgtcag caccttttct agcagctgcc agtttggagc attgccctct aagagcttta 180

aaactatttt tttacatgcc ttatatacat tccactaatg acattcttat aataatatta 240

aacacatgat cttggtacta acatactcac tgtgaaccca gcctat 286

<210> 214
<211> 121
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens MGST2 3'-UTR

NM_002413

<400> 214
ctttttctct tccctttaat gcttgcagaa gctgttccca ccatgaaggt aatatggtat 60

catttgttaa ataaaaataa agtctttatt ctgtttttct tgaaaaaaaa aaaaaaaaaa 120

a 121

<210> 215
<211> 582
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens MGST2 3'-UTR

NM_001204366.1

<400> 215
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agtgcatggc cagaaccagc cagacctttg gagttcaaga actcgagagg tgggtgaaaa 120

ctgccattgc ctccacagac tgtcttctcc gtggaaagaa gacctgagtc accagggctg 180

ggaaacctgc accactgaga cgagcacagc ctctgccggc atgcaagtgg ccgctgtcag 240

gacacatgga ctgaaagtgg tttgtcagct gctccattag gtttttttta cccatatgtt 300

tgctaccttt ctttccttga tttaaaaata gggaggggga gcagtctcag ctgtcttcag 360

ctgctaggga gatttttttc cccctcctga gctactgttt cccccaaccc gagcctttct 420

ctcttattgt acccaccctt tctgatgaag tcatcaaagc aaagattgca taactgatgc 480

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accaccacgc tgccaaatgg agctctctgc tgcaaccact ac 582

<210> 216
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens C11orf67 3'-UTR

AAMDC-005 ENST00000526415

<400> 216
tggagcctta agaggagaat aaatcactaa gtgccta 37

<210> 217
<211> 266
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PCCA 3'-UTR

NM_000282

<400> 217
aggatttata acctttcagt catcacccaa tttaattagc catttgcatg atgctttcac 60

acacaattga ttcaagcatt atacaggaac acccctgtgc agctacgttt acgtcgtcat 120

ttattccaca gagtcaagac caatattctg ccaaaaaatc accaatggaa attttcattg 180

atataaatac ttgtacatat gatttgtact tctgctgtga gattccctag tgtcaaaatt 240

aaatcaataa aactgagcat ttgtct 266

<210> 218
<211> 142
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens GLMN 3'-UTR

NM_053274

<400> 218
aagttccatt tcctaaataa aaactaataa aatatagtac tttccattat gattcattta 60

ataccttttat aaaaaatttt tctgtaaaaa tttactgctt gaaaaataaa tgtagctttt 120

ctcatttatc aaaaaaaaaa aa 142

<210> 219
<211> 276
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens DHRS1 3'-UTR

NM_001136050

<400> 219
ccctcctggt ctgacactac gtctctgctt gtcttctcat ttggacttgg tggttcgtcc 60

tgtctcagtg aaacagcagc ctttcttgtt tacccatacc cttgatatga agagaagccc 120

tctgctgtgt gtccgtggtg agttctgggg tgcgcctagg tcccttcttt gtgccttggt 180

tttccttgtc cttcttttta ctttttgcct tagtattgaa aaatgctctt ggagctaata 240

aaagtctcat ttctctttca aaaaaaaaaa aaaaaa 276

<210> 220
<211> 450
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PON2 3'-UTR

PON2-001 ENST00000433091

<400> 220
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tctgagggaa tttaaccagc aacattgacc cagaaatgta tggcatgtgt agttaatttt 120

attccagtaa ggaacggccc ttttagttct tagagcactt ttaacaaaaa aggaaaatga 180

acaggttctt taaaatgcca agcaagggac agaaaagaaa gctgctttcg aataaagtga 240

atacattttg cacaaagtaa gcctcacctt tgccttccaa ctgccagaac atggattcca 300

ctgaaataga gtgaattata tttccttaaa atgtgagtga cctcacttct ggcactgtga 360

ctactatggc tgtttagaac tactgataac gtattttgat gttttgtact tacatctttg 420

tttaccatta aaaagttgga gttatattaa 450

<210> 221
<211> 277
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens NME7 3'-UTR

NM_013330

<400> 221
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aggaatgtgt tcattctttt attgtccgtt gttttaacct gactgaatac aagatcaaca 120

agagcactgt actcctggca attattacat atgttagaac atggattttg cactgtagac 180

aacatttaac accagtctat ggggtactgc attgcttttt ataaagttca aaataaagat 240

ttattttcaa acaaaaaaaa aaaaaaaaaa aaaaaaa 277

<210> 222
<211> 163
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ETFDH 3'-UTR

NM_004453

<400> 222
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acagatttca gaatgtcttt ctgcatatta ctgaacagaa tagtcacaaa atgattatca 120

aataaaaatt ttatactata tgtaagattg tcccataaag aaa 163

<210> 223
<211> 275
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens ALG13 3'-UTR

BC117377

<400> 223
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gtattttatg ttagtggtta aatgatttag gtgattagtg tttactattg tatttgtctt 120

taaaattatt ttatcttttg atttaaaata gtactttaaa attaaggggt attattttgg 180

gctgtgacta aggaaattga gatggatgta caactagccc catattgagc atacttcatt 240

gtattcagct gttttcctgt cagccatttg tcagc 275

<210> 224
<211> 664
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens ALG13 3'-UTR

NM_001099922.2

<400> 224
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gtattttatg ttagtggtta aatgatttag gtgattagtg tttactattg tatttgtctt 120

taaaattatt ttatcttttg atttaaaata gtactttaaa attaaggggt attattttgg 180

gctgtgacta aggaaattga gatggatgta caactagccc catattgagc atacttcatt 240

gtattcagct gttttcctgt cagccatttg tcagctttat attagctgat ggtaccaatt 300

gataaaatga atataaagta tttcattggt tcaaaaatca cacatcatat taaaccatgc 360

agaattggag taacttccac ttttttctag aaagtaaaac caagagcctt tgcttctgga 420

taactcactt aatattaaat taaagagctc ttcacgtttc ttgagaatta tctgaagcca 480

gttgcattct gtgatatcag ttttgaaggc acatggttct ctgctttaga tttatcccat 540

atgctattgt ttaatactgg atgtatgtaa gtgttttact gcactgtatt gaattggtgt 600

cttttgcaca gttagcagta aataaaaatt agcatttaaa attgccaaaa aaaaaaaaaa 660

aaaa 664

<210> 225
<211> 640
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens DDX60 3'-UTR

DDX60-001 ENST00000393743

<400> 225
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tcatgaatac tcacaaatta tttagtatac ctgaatcttg gtttcttttt ataactgagt 240

aataatggtt acatctcagg tagtttgagg attgactaaa aaaatgcgag aatgttgtat 300

gtgactgaat aacaattttt actctgcgaa gccaaagtaa atataatatt atcagtaact 360

ttatccccag tgtcagtatt tataaaatgt ttattaaggc tagaaaaaat gaatacaata 420

tcctgaaggt gaaatatatt ctcttcaatt agcataaata tgatttacat aagttagcta 480

tacagctatt gagatagtac tttctagtaa acttaaacta ctttttaaac atacattttg 540

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NM_015522.3

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tgttatggca tattacacca atcagagaaa tagagtttta aagtagtggt ttgatattga 180

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NM_001009921, NM_015303

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ccacattgct gtcatggcgt cagttcacca gactcattga ttttgttttg cttgttaagc 240

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ggaacagtgg ttggccaggc tgcagtataa ctgaagcatg ccttggagag agcagacact 480

gtgggggcca gggccatctc cctttaatgt gttcatgtta aaacctattt gagtgtaaga 540

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NM_030790

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actttgtata taaaaatttg ggttctctat tctgtagtgc tgtacatttt tgttcctttg 240

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atggaaaaag ttgtgtaaat aaaaataatt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 360

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NM_004935

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ggggtgcctg agcccgaatt tctcactccc tttgtggact ttatttaatt tcataaattg 180

gctcctttcc cacagtcaaa aaaaaaaaaa aaaaa 215

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BC091516

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NM_016004

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ggtatatgca tcttctgtaa tactcagata ggtataagat ttttcacaaa atccttatgt 180

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CLYBL-003 ENST00000339105

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FAM114A2-006 ENST00000520667

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atggtttaaa gaggaagatt gttgccttca gtgtttgatt gaagtattca ggttctcaca 180

gtattctttc cagttgttgt aattcataaa ttatttgaaa agaaactttt gtagaaagtc 240

caagaataat aactctagat aaagattagt gggacactca ggcaaaaatg ttggtctttc 300

tttgacatgt tgcaaaatgt tatcaatttt gtcatggata taatttgcag cccatggata 360

taactggttg ataagccaga gaaaaataat ttagtgttct aaaattcatg gcatgtgtgg 420

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NM_001243661

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NM_001145128

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tggaaacaag ttttaataca attttaaaat gtattgctct ttgcctgaac tttgatgctt 240

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aatgtattat tttccttttt aacattttca gtagaaaagt cagtctctgt taaaattact 360

cattaaatgt tagaaagctt taagacattt aacattgtta taaatgaaac caaaatatgg 420

gttatacatt ttacatacaa aactgtttgt gaactttgtg aacataagat actatcattt 480

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NM_014599

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ttaaatctat ttgccatttc aaaaaaaaaa aaaaaaaaaa 160

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HRSP12-001 ENST00000254878

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atccagttac ttttttaaat tacacctgtg tgcacctgta ttactgaata taggaaagag 240

atacccatta catagttact cagtaaacaa aagagaaata ccaggtagga aagaagagtt 300

actattcctg agaaataatc aagaacatat ttaatttaaa ctaatgatgt gaactattta 360

gttttgatgt ccgttatgtg attctgcttt tacttgagta aaattaaagt gtttaaattt 420

gagatcaagg agaagatagt ggaacaaaat gttatataga taatattttt ctaatggaaa 480

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<210> 238
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<223> Homo sapiens STX8 NM_004853 3'-UTR

<400> 238
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aaaaaaa 127

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ACAT1-001 ENST00000265838

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cttcttctgc ttttttcttg gtaaccttga aaagtttgat acatttttgc attctgagtc 240

tatacttatc gaaatatggt agaaatacca atgtgtaata ttagtgactt acataagtag 300

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aatgctcttt ataggtaatt tacatt 386

<210> 240
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IFT74-201 ENST00000433700

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aatttttgtg gcctctttta agaatgatat tttaaaatag taaatagttc aataaatggt 180

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NM_014970

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ttttatatgt tgttagctgc agattaaccc cagcccctct gtcttctgtt aagtacagtt 180

gatactgaca ttgttcactc atcaaaccac atcttgatgc taagtaacat ttcccatgag 240

ccacaaaact gaatgctgaa aagctactag actggaaaac aaacactgca ttatgtatgt 300

taagtgacta atttaatttc aattaaaaag cgtaaagtga aaatgaaaaa aaaaaaaaaa 360

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NM_005186

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ctcttcaggg acttgtgtac tggttatggg ggtgccagag gcactaggct tggggtgggg 660

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 780

aaa 783

<210> 243
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<223> Homo sapiens COX11 3'-UTR

NM_001162861

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aagaaaatgg ccagtaaaaa aaaaaaaa 88

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BC127733

<400> 244
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agctgcctgg gtctttt 77

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agctgcctgg gtctttttgt gtgaatattt aatggtgctc catgactgtt gagttttaaa 120

aacctcgtta aattttgcca aatcagttgc ccccaaaagg gaatatgctt ttccttattt 180

ttttttctaa aatgctattt atctctaagg aaaaa 215

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NM_012260

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<223> Homo sapiens IFT88 3'-UTR

NM_175605

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gtattctatt ctgtatgtat gcatttaagt tgtttttttc ttttaaggaa taaaaacagg 180

taaaactaat actttaggcc agtgacttcc ttagcttttt gaaaacattg acacacagga 240

agaaataaat ttcataacac aaaaaaaaaa aaa 273

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<223> Homo sapiens IFT88 3'-UTR

IFT88-001 ENST00000351808

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NM_002491

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NM_018075

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ccaaacgaag tggctcccat gtggcaagca cccttctcag tttcgcagtg gcttggctcg 180

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ANO10-005 ENST00000451430

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<211> 486
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NM_032146

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ggactctgac ctttttaaga acataggact tcaggtatgc taatttggcc attaattatt 180

taaaaactaa atattccctc aaaagggctc cctagaatta tcaagttctt agtgaaggtc 240

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NM_005768

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cacgttggcc aggctggtct cgaactcctg accgcaagtg atccacccgc ctccgcctcc 420

caaagtgctg ggattacagg cgtgagccac cgtgcccggc ccaaagggga aactcttgtg 480

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tgccgctacc accacccccc ccatgggggg gtggagaggg gtgcaaggcc ctgcctgctc 660

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<223> Homo sapiens ABCD3 3'-UTR

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<223> Homo sapiens COPG2 3'-UTR

NM_012133

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acatttggcc ctgagccagc agatcaagca aatgtctatc tttgcgcatg ggttgttttt 180

ttttttttttc tttttattct acttggtcag ctttgggacg atagtgcagc tttgggtgat 240

cttgaaaatc aaatactatc ctatactcca gctgcttaac ttcattttat tctttaatgt 300

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<212> DNA
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<223> Homo sapiens MIPEP 3'-UTR

NM_005932

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aaactggtag aacttggaat aaataatttg ttttaattaa aaaaaaaaaa aaaaaa 176

<210> 257
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<223> Homo sapiens LEPR 3'-UTR

NM_002303

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taagcctacc aatgtagaca cgctcttcta ttttattccc aagctctagt gggaaggtcc 240

cttgtttcca gctagaaata agcccaacag acaccatctt ttgtgagatg taattgtttt 300

ttcagagggc gtgttgtttt acctcaagtt tttgttttgt accaacacac acacacacac 360

acattcttaa cacatgtcct tgtgtgtttt gagagtatat tatgtattta tattttgtgc 420

tatcagactg taggatttga agtaggactt tcctaaatgt ttaagataaa cagaattc 478

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<223> Homo sapiens LEPR 3'-UTR

NM_001198688

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aatg 64

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NM_001017927

<400> 259
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<210> 260
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<223> Homo sapiens C2orf76 3'-UTR

C2orf76-001 ENST00000409466

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aatctggtta tttctttctc ttcaggtctt tccttctctc tttctttttc tttgttgttg 180

taaaataata tattatgaga aaaacatttg atctttttaa agggaaataa attgttatta 240

aaaa 244

<210> 261
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<223> Homo sapiens ABCA6 3'-UTR

NM_080284.2

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aatagtatgt ttaattttaa agatcattta aaattaacat caggtatatt ttgtaaattt 120

agttaacaaa tacataaatt ttaaaattat tcttcctctc aaacataggg gtgatagcaa 180

acctgtgata aaggcaatac aaaatattag taaagtcacc caaagagtca ggcactgggt 240

attgtggaaa taaaactata taaactt 267

<210> 262
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<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens LY96 3'-UTR

NM_015364.4

<400> 262
aataaattga gtatttaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 45

<210> 263
<211> 755
<212> DNA
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<220>
<223> Homo sapiens CROT 3'-UTR

NM_ 001243745.1

<400> 263
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gtaaaaattt ttacagttat tattgttatt ttcataatcc aaaagaagga atgaatcact 120

taactttggg agttttcagt gggtggattc gggaacttgt taaaatgcag atttgctggg 180

ataagtgatt ctgattcaca tggctggaat gaggcccaga gattcttatt ttaacaatca 240

cttcatgtgg tttggctgca ggtaatctgt agaccatgct gaaggaaaac attttgtcca 300

ggtgactagc ttgaaaaatc agaaacacta aaatagacat gtcacatagg tggcatagaa 360

atattttcgt agtacaatgg agaaagggaa tcattaaaaa tcagagtgga gaatggttat 420

gtatattgta tatttcagtt agataaattg aggaagctag tataataatt attgaaggtc 480

tcaataattt tccacaaaat tctttaactt cttcagctca accatttctg tacttctcta 540

ctatgaatca gaggatgagg ttgtataatt caaaagcatt gccttagtct agaaataatt 600

attgtaccta tcatttagtt ttagaaataa aaagcaagct gatttttttt gatgaaccat 660

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agccttgagt tgttttaatt aaagaggggt aaagg 755

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<220>
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ENPP5-002 ENST00000230565

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aaggtttcaa attctgggaa accagttcca aacatttgca gaaaccatta agcagttaca 120

tatttaggta tacacacaca cacacacaca catacacaca cacggaccaa aatacttaca 180

cctgcaaagg aataaagatg tgagagtatg tctccattgt tcactgtagc atagggatag 240

ataagatcct gctttatttg gacttggcgc agataatgta tatatttagc aactttgcac 300

tatgtaaagt accttatgta ttgcacttta aatttctctc ctgatgggta ctttaatttg 360

aaatgcactt tatgcacagt tatgtcttat aacttgattg aaaatgacaa ctttttgcac 420

ccatgtcaca gaatacttgt tacgcattgt tcaaactgaa ggaaatttct aataatcccg 480

aataatgaac gtagaaatct atctccataa attgagagaa gaagaaggtg ataagtgttg 540

aaaattaaat gtgataacct ttgaaccttg aattttggag atgtattccc aacagcagaa 600

tgcaactgtg ggcatttctt gtcttatttc tttccagaga acgtggtttt catttatttt 660

tccctcaaaa gagagtcaaa tactgacaga ttcgttctaa atatattgtt tctgtcataa 720

aattattgtg atttcctgat gagtcatatt actgtgattt tcataataat gaagacacca 780

tgaatatact ttttttctat atagttcagc aatggcctga atagaagcaa ccaggcacca 840

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SERPINB7-203 ENST00000546027

<400> 265
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tagatttgag tttaattgga aaaatgtggt gtttcctttg agtttatttc ttcctaacat 120

tggtcagcag atgacactgg tgacttgacc cttcctagac acctggttga ttgtcctgat 180

ccctgctctt agcattctac caccatgtgt ctcacccatt tctaatttca ttgtctttct 240

tcccacgctc atttctatca ttctccccca tgacccgtct ggaaattatg gagagtgctc 300

<210> 266
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<212> DNA
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<220>
<223> Homo sapiens TCP11L2 3'-UTR

NM_152772

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cattgatggc attagagatc cagcacattc tcagtactgt ggtgcagtat tagcccaaat 120

ctgtgtaatg ggtaatatta gcattacaga agacacacac atcacataga ccctcagaag 180

acgtaaacat cacatagacc ctatttgtgc atcattttca agtttaaaac agatatttgt 240

aatgaacaga aaacaatttg taattaatta tattacctat ataatacttg taaatgtttt 300

cttaaccatt tatatttggc ttatgacatt taacccctaa ggagttgttt ttctcacttg 360

ttattatcaa acctaatggt ttttaatttt ggtacaactc cttaaagggt tgaaggttgt 420

gacaataact gagggaactg atgttctgaa taaatgatgt gaagtaaaca caattgtatt 480

tgaaaaaaaa aaaaaaaaaa aaaaaaaaa 509

<210> 267
<211> 84
<212> DNA
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<220>
<223> Homo sapiens IRAK1BP1 3'-UTR

NM_001010844

<400> 267
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gtttacgttt gtcctgaata tata 84

<210> 268
<211> 338
<212> DNA
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<223> Homo sapiens CDKL2 3'-UTR

CDKL2-002 ENST00000307465

<400> 268
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caagagtgct gatatcccaa gaggagagat tcatggtttt gatcatttcc ttctgaactg 120

cctgcatttt ctgaggaagg ccttctagaa gaaggaaaga caaagacttc caaatgtttc 180

aaaggaagat tgaacaaatg gccctcccca actgttatcc cattaccttt cacgtccacc 240

gatgctattt caagacatat ccagtggaat aacagtgata tggttcttgt tacatgaatg 300

tgtatttact gttaggagat tgtatatttt aagttacc 338

<210> 269
<211> 367
<212> DNA
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<220>
<223> Homo sapiens GHR 3'-UTR

GHR-202 ENST00000537449

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cgtttaagcc aaaacaatgt ttaaaccttt tttgggggag tgacaggatg gggtatggat 120

tctaaaatgc cttttcccaa aatgttgaaa tatgatgtta aaaaaataag aagaatgctt 180

aatcagatag atattcctat tgtgcaatgt aaatatttta aagaattgtg tcagactgtt 240

tagtagcagt gattgtctta atattgtggg tgttaatttt tgatactaag cattgaatgg 300

ctatgttttt aatgtatagt aaatcacgct ttttgaaaaa gcgaaaaaat caggtggctt 360

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<210> 270
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<212> DNA
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<223> Homo sapiens KIAA1107 3'-UTR

NM_015237

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caaatgataa ttgcattagc cggatataaa ctttctttaa tattgagtct ttccaattta 120

atgaggtaaa catagtttat ttattaatat atcacatata gaaaaatgtt tttctaaagt 180

ttttgagcat gttttctcta attattagag aaattagaag acttataagg aaaccctagc 240

ttcagttttc ctttcctagc tgatgatttg ttcacttaat cattattcaa gaatttaaaa 300

tgtgaatgca gaagtagatc agtcccttta ctttttgctc tgcatagggt aacatagtaa 360

tttaacaata aaaacttacc gtgcttgtgt ccaaaaaaaa aaaaaa 406

<210> 271
<211> 301
<212> DNA
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<220>
<223> Homo sapiens RPS6KA6 3'-UTR

RPS6KA6-001 ENST00000262752

<400> 271
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ctattcttat caaaggcatc gttgtctgct aaattacttg aatattaagt aatattaaat 120

ccccattttt aggggaagtg agatttaaaa aaccattcac aggtccacaa tattcatact 180

atgtgtttgc agtagtgttc aagtgtttat ttaagcatat aattggtgtc caccaggtcc 240

tcacaacttc tctgcacaca agcttctaaa attcctttca aataaagtta ctttaatatt 300

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<210> 272
<211> 777
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<223> Homo sapiens CLGN 3'-UTR

NM_004362, NM_001130675

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ccagacctga actttaatca gtctgcacat cctgtttcta atatctagca acattatatt 120

ctttcagaca tttattttag tccttcattt cagaggaaaa agaagcaact ttgaagttac 180

ctcatctttg aatttagaat aaaagtggca cattacatat cggatctaag agattaatac 240

cattagaagt tacacagttt tagttgtttg gagatagttt tggtttgtac agaacaaaat 300

aatatgtagc agcttcattg ctattggaaa aatcagttat tggaatttcc acttaaatgg 360

ctatacaaca atataactgg tagttctata ataaaaatga gcatatgttc tgttgtgaag 420

agctaaatgc aataaagttt ctgtatggtt gtttgattct atcaacaatt gaaagtgttg 480

tatatgaccc acatttacct agtttgtgtc aaattatagt tacagtgagt tgtttgctta 540

aattatagat tcctttaagg acatgccttg ttcataaaat cactggatta tattgcagca 600

tattttacat ttgaatacaa ggataatggg ttttatcaaa acaaaatgat gtacagattt 660

tttttcaagt ttttatagtt gctttatgcc agagtggttt accccattca caaaatttct 720

tatgcataca ttgctattga aaataaaatt taaatatttt ttcatcctga aaaaaaa 777

<210> 273
<211> 466
<212> DNA
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<220>
<223> Homo sapiens CLGN-202 3'-UTR

NM_004362, NM_001130675

ENST00000325617

<400> 273
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ccagacctga actttaatca gtctgcacat cctgtttcta atatctagca acattatatt 120

ctttcagaca tttattttag tccttcattt cagaggaaaa agaagcaact ttgaagttac 180

ctcatctttg aatttagaat aaaagtggca cattacatat cggatctaag agattaatac 240

cattagaagt tacacagttt tagttgtttg gagatagttt tggtttgtac agaacaaaat 300

aatatgtagc agcttcattg ctattggaaa aatcagttat tggaatttcc acttaaatgg 360

ctatacaaca atataactgg tagttctata ataaaaatga gcatatgttc tgttgtgaag 420

agctaaatgc aataaagttt ctgtatggtt gtttgattct atcaac 466

<210> 274
<211> 423
<212> DNA
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<220>
<223> Homo sapiens TMEM45A 3'-UTR

NM_018004

<400> 274
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tgtttctcga tcttttgttt ggagaacagc tggctaagga tgactctaag tgtactgttt 120

gcatttccaa tttggttaaa gtatttgaat ttaaatattt tctttttagc tttgaaaata 180

ttttgggtga tactttcatt ttgcacatca tgcacatcat ggtattcagg ggctagagtg 240

atttttttcc agattatcta aagttggatg cccacactat gaaagaaata tttgttttat 300

ttgccttata gatatgctca aggttactgg gcttgctact atttgtaact ccttgaccat 360

ggaattatac ttgtttatct tgttgctgca atgagaaata aatgaatgta tgtattttgg 420

tgc 423

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<211> 152
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<223> Homo sapiens TBC1D8B 3'-UTR

TBC1D8B-007 ENST00000276175

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ttcctgtgag tagggctcag ggatttatct tgttaccaat gtgtctgaag gccaaaatat 120

atatccagaa gcacaatgca tcattccttt gt 152

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<211> 81
<212> DNA
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<220>
<223> Homo sapiens ACP6 3'-UTR

NM_016361

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aaaaaaaaaa aaaaaaaaaa a 81

<210> 277
<211> 111
<212> DNA
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<223> Homo sapiens RP6-213H19.1 3'-UTR

MST4-003 (RBM4B-003 ENST00000496850)

<400> 277
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agattaacaa tgcttaaccc atgagctcca tgtgcctttt ggatctttgc a 111

<210> 278
<211> 138
<212> DNA
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<220>
<223> Homo sapiens SNRPN 3'-UTR

NM_022807

<400> 278
catactgttg atccatctca gtcacttttt cccctgcaat gcgtcttgtg aaattgtgta 60

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tagagcaatt aaactgtg 138

<210> 279
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GLRB-005 ENST00000512619

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actgctatgg aaaacccatt gaagttaaca acggacttgg gaaatctcag gctaagaaca 120

acaagaagcc tccccctgcg aaacctgtta ttccaacagc agcaaagcga attgatcttt 180

atgcaagagc attgtttcct ttctgcttct tgttcttcaa tgttatatat tggtctatat 240

atttatgata aatcttttcc atttgtacaa aataaaattc catttcattg tgacctactc 300

ctttcataaa tgccaatctg tgagaacttt tgaattttca tagcaacatt gcattttgga 360

tgccatttga ttgtaataaa actgtggcac cttaattttg aatggcagca tgatcatgta 420

atatc 425

<210> 280
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<212> DNA
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<223> Homo sapiens HERC6 3'-UTR

NM_017912

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acctaaataa tacaagagat taatgaatag tggttagaag tagttgaggg agagattggg 120

ggaatgggga gatgatgatg atggtcaaag ggtgcaaaat ctcacacaag actgaggcag 180

gagaataggg tacagagata gggatctaag gatgacttgg acacactccc tggcactgaa 240

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gccacttgct ctagcccact cccaccctgt ggaatgtact ttcacttttg ctgcttcact 600

gccttgtgct ccaataaatc cactccttca ccacccaaaa aaaaaaaaaa a 651

<210> 281
<211> 264
<212> DNA
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<220>
<223> Homo sapiens CFH 3'-UTR

NM_000186

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catttttat gtattgtttt actccttttt attcatacgt aaaattttgg attaatttgt 120

gaaaatgtaa ttataagctg agaccggtgg ctctcttctt aaaagcacca tattaaatcc 180

tggaaaacta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 240

aaaaaaaaaa aaaaaaaaaa aaaa 264

<210> 282
<211> 401
<212> DNA
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<223> Homo sapiens GALC 3'-UTR

GALC-002 ENST00000393569

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agagccaatt cttgtttcat tggaacagta tatgaggctt ttgagactaa aaataatgaa 120

gagtaaaagg ggagagaaat ttatttttaa tttaccctgt ggaagatttt attagaatta 180

attccaaggg gaaaactggt gaatctttaa cattacctgg tgtgttccct aacattcaaa 240

ctgtgcattg gccataccct taggagtggt ttgagtagta cagacctcga agccttgctg 300

ctaacactga ggtagctctc ttcatcttat ttgcaagcgg tcctgtagat ggcagtaact 360

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<211> 51
<212> DNA
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<220>
<223> Homo sapiens GALC 3'-UTR

GALC-005 ENST00000393568

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<210> 284
<211> 360
<212> DNA
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<220>
<223> Homo sapiens PDE1A 3'-UTR

NM_001003683.2

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ccgggctcaa ctgctaccga acagattcat ctagtggcta catcagcacc ttgtgctttc 240

agatatctgt ttcaatggca ttttgtggca tttgtcttta ccgagtgcca ataaattttc 300

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<210> 285
<211> 308
<212> DNA
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<220>
<223> Homo sapiens PDE1A 3'-UTR

PDE1A-003 ENST00000410103

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gcagattgct caataagcat catgagccac ataaataaca gctgtaaact ccttaattca 180

ccgggctcaa ctgctaccga acagattcat ctagtggcta catcagcacc ttgtgctttc 240

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tttgagca 308

<210> 286
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<212> DNA
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<220>
<223> Homo sapiens GSTM5 3'-UTR

NM_000851

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ccccaaggcc tcattggctt cctttcttct aacatcatcc ctccccgcat cgaggctctt 180

taaagcttca gctccccact gtcctccatc aaagtccccc tcctaacgtc ttcctttccc 240

tgcactaacg ccaacctgac tgcttttcct gtcagtgctt ttctcttctt tgagaagcca 300

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cctctgttcc tcactgtggg gattactaca gaaaggtgct ctgtgccaag ttcctcactc 660

attcgcgctc ctgtaggccg tctagaactg gcatggttca aagaggggct aggctgatgg 720

ggaaggggggc tgagcagctc ccaggcagac tgccttcttt caccctgtcc tgatagactt 780

ccctgatcta gatatccttc gtcatgacac ttctcaataa aacgtatccc accgtattgt 840

aaaaaaaaaa aaaaa 855

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<212> DNA
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<220>
<223> Homo sapiens CADPS2 3'-UTR

CADPS2-002 ENST00000412584

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accttgtcct tgtaattaca ttcattgttt gttttggcca aataaaaatg cttgtatttc 120

tttaaaaagt aagcctgaat gtagagtaaa aggggaaatg ccaagatttt ggggtttttt 180

tgtttccttt ttttgtttgt ttgtttgttt gttttttgg agaagagcat cctcttttgt 240

gtagtttgac ctaaaaatga accttggctc tgcttgtgat cagaacatga actttttttt 300

ttaaagaaga tttgagcatt tttctgtaat cacatcaaaa tgatgttttc tgtgtaaagc 360

gagatacata tttctcataa tgcagcattg tgagaagtca gttcggacca ctgcaccaa 419

<210> 288
<211> 162
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CADPS2 3'-UTR

CADPS2-001 ENST00000449022

<400> 288
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accttgtcct tgtaattaca ttcattgttt gttttggcca ataaaaatg cttgtatttc 120

tttaaaaagt aagcctgaat gtagagtaaa aggggaaatg cc 162

<210> 289
<211> 247
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens AASS 3'-UTR

AASS-001 ENST00000417368

<400> 289
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aaatgggttt gctaatgtgc tgttttaaag tataaagcat aatatgtttt ggttaacaca 120

atgtactttt tgaactataa atctttattt taatatggaa atgtttggaa caggagatgc 180

aagccactaa cagagaactt taataattct accctgtatt ttataaatac gtatgtgaaa 240

gtgatga 247

<210> 290
<211> 695
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TRIM6-TRIM34 3'-UTR

NM_001003819

<400> 290
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ctgcaacatt cacaccattg cttccttgtg gtttcccttc tttagaactt ttactcatcc 120

ttgagatgta tggtgtattt ggcttgagtt atgagagatg cttatttatt catttactct 180

ttttcatatt ttcagagaaa gttacctaat ccctcctaaa gacacagcag tatgggtata 240

acatccttgc cttcccattt atccatgttt cactttatca ctgatatgaa gaggcccaaa 300

gcctgttagc caccatccat gctacctagg tagtccatag gaaccacccc catgaccacc 360

accaacatca actaaaggtt cttggagggt atgtcagtgt gttgctcagg ataccccagg 420

tacatcaagg aatcaaggag aggaaaatat gagcaatatg tgtattcaga gtgaagattt 480

tatgtccaga gtatttgagc tcaaaccttg cctgttgttt tctaatcatg atgaatactt 540

tctcagtttc tttttcctga aatataaatt gggatttaag actgtaccta actattaaga 600

tcactgtgta aaactaagtg tctctaaatg taatgcatcg atttagtgtc tggaacataa 660

taaatatttg ctctcatgat tgctaaaaaa aaaaa 695

<210> 291
<211> 918
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens SEPP1 3'-UTR

NM_005410

<400> 291
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ttataaacta ccaaattagt gaaccaaaaa tagaaattag atttgtgcaa acatggagaa 120

atctactgaa ttggcttcca gattttaaat tttatgtcat agaaatattg actcaaacca 180

tatttttat gatggagcaa ctgaaaggtg attgcagctt ttggttaata tgtcttttt 240

tttctttttc cagtgttcta tttgctttaa tgagaataga aacgtaaact atgacctagg 300

ggtttctgtt ggataattag cagtttagaa tggaggaaga acaacaaaga catgctttcc 360

attttttct ttacttatct ctcaaaacaa tattactttg tcttttcaat cttctacttt 420

taactaataa aataagtgga ttttgtattt taagatccag aaatacttaa cacgtgaata 480

ttttgctaaa aaagcatata taactatttt aaatatccat ttatcttttg tatatctaag 540

actcatcctg atttttacta tcacacatga ataaagcctt tgtatctttc tttctctaat 600

gttgtatcat actcttctaa aacttgagtg gctgtcttaa aagatataag gggaaagata 660

atattgtctg tctctatatt gcttagtaag tatttccata gtcaatgatg gtttaatagg 720

taaaccaaac cctataaacc tgacctcctt tatggttaat actattaagc aagaatgcag 780

tacagaattg gatacagtac ggatttgtcc aaataaattc aataaaaacc ttaaagctga 840

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900

aaaaaaaaaa aaaaaaaa 918

<210> 292
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens SEPP1 3'-UTR

SEPP1-004 ENST00000506577

<400> 292
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ttataaacta ccaaattagt gaaccaaaaa tagaaattag atttgtgcaa acatggagaa 120

atctactgaa ttggcttcca gattttaaat tttatgtcat agaaatattg actcaaacca 180

tatttttat gatggagcaa ctgaaaggtg attgcagctt ttggttaata tgtctttttt 240

tttctttttc cagtgttcta tttgctttaa tgagaataga aacgtaaact atgacctagg 300

ggtttctgtt ggataattag cagtttagaa tggaggaaga acaacaaaga catgctttcc 360

atttttttct ttacttatct ctcaaaacaa tattactttg tcttttcaat cttctacttt 420

taactaataa aataagtgga ttttgtattt taagatccag aaatacttaa cacgtgaata 480

ttttgctaaa aaagcatata taactatttt aaatatccat ttatcttttg tatatctaag 540

actcatcctg atttttacta tcacacatga ataaagcctt tgtatcttt 589

<210> 293
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens PDE5A 3'-UTR

PDE5A-002 ENST00000264805

<400> 293
gtggcctatt tcatgcagag ttgaagttta cagagatggt gtgttctgca atatgcctag 60

<210> 294
<211> 422
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens SATB1 3'-UTR

SATB1-004 ENST00000417717

<400> 294
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caccttgtct tctctcagaa aacctttgtt gttcattgtt tggccaatga atcttcaaaa 120

acttgcacaa acagaaaagt tggaaaagga taatacagac tgcactaaat gttttcctct 180

gttttacaaa ctgcttggca gccccaggtg aagcatcaag gattgtttgg tattaaaatt 240

tgtgttcacg ggatgcacca aagtgtgtac cccgtaagca tgaaaccagt gtttttgtt 300

tttttttag ttcttattcc ggagcctcaa acaagcatta taccttctgt gattatgatt 360

tcctctccta taattatttc tgtagcactc cacactgatc tttggaaact tgccccttat 420

tt 422

<210> 295
<211> 981
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens CCPG1 3'-UTR

CCPG1-002 ENST00000442196

<400> 295
ttcacaattg agttaaatta gacaactgta agagaaaaat ttatgctttg tataatgttt 60

ggtattgaaa ctaatgaaat taccaagatg acaatgtctt ttcttttgtt tctaagtatc 120

agtttgataa ctttatatta ttcctcagaa gcattagtta aaagtctact aacctgcatt 180

ttcctgtagt ttagcttcgt tgaatttttt ttgacactgg aaatgttcaa ctgtagtttt 240

attaaggaag ccaggcatgc aacagatttt gtgcatgaaa tgagacttcc tttcagtgta 300

agagcttaaa gcaagctcag tcatacatga caaagtgtaa ttaacactga tgtttgtgtt 360

aaatttgcag cagagcttga gaaaagtaca ttgttctgga atttcatcat taacatttta 420

taatcttaca ctcacttctt gtctttttgt gggttcaaga gccctctgac ttgtgaagaa 480

tttgctgccc tcttaagagc ttgctgactt gttttcttgt gaaatttttt gcacatctga 540

atatcgtgga agaaacaata aaactacacc atgaggaaaa ctaaaggtct ttatttaaaa 600

tctggcattg tattaacatg taattttata ctatgtggta ttttatacat ttcctcagta 660

gtgatatttg gtaaagcagt tcatacagct tttttctaag ttccatgaat cttacccagt 720

gtttaccgaa gtatttaagc agcatctgaa tatttccacc cagcaatgtt aatttatcta 780

ggaaagttca gaatttcatc ttcatgttga atttcccttt taacttccgt tcatagacat 840

atatgtgact tccaattcga ccctctggca agtgagtgtg gaagaaaaca gcagttcttt 900

tataattgct tgaaattagg aaagcgctta tttcctagaa gcaaataaat gtttaagtaa 960

ataaaggcta cattttgctg a 981

<210> 296
<211> 575
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CCPG1 3'-UTR

CCPG1-004 ENST00000425574

<400> 296
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ggtattgaaa ctaatgaaat taccaagatg acaatgtctt ttcttttgtt tctaagtatc 120

agtttgataa ctttatatta ttcctcagaa gcattagtta aaagtctact aacctgcatt 180

ttcctgtagt ttagcttcgt tgaatttttt ttgacactgg aaatgttcaa ctgtagtttt 240

attaaggaag ccaggcatgc aacagatttt gtgcatgaaa tgagacttcc tttcagtgta 300

agagcttaaa gcaagctcag tcatacatga caaagtgtaa ttaacactga tgtttgtgtt 360

aaatttgcag cagagcttga gaaaagtaca ttgttctgga atttcatcat taacatttta 420

taatcttaca ctcacttctt gtctttttgt gggttcaaga gccctctgac ttgtgaagaa 480

tttgctgccc tcttaagagc ttgctgactt gttttcttgt gaaatttttt gcacatctga 540

atatcgtgga agaaacaata aaactacacc atgag 575

<210> 297
<211> 230
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CNTN1 3'-UTR

CNTN1-002 ENST00000348761

<400> 297
atgtgttgtg acagctgctg ttcccatccc agctcagaag acacccttca accctgggat 60

gaccacaatt ccttccaatt tctgcggctc catcctaagc caaataaatt atactttaac 120

aaactattca actgatttac aacacacatg atgactgagg cattcgggaa ccccttcatc 180

caaaagaata aacttttaaa tggatataaa tgatttttaa ctcgttccaa 230

<210> 298
<211> 922
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CNTN1 3'-UTR

CNTN1-004 ENST00000547849

<400> 298
tcgttgacac tcaccatttc tgtgaaagac ttttttttt ttaacatatt atactagatt 60

tgactaactc aatcttgtag cttctgcagt tctccccacc cccaacctag ttcttagagt 120

atgtttcccc ttttgaaaca tgtaaacata ctttgggcat aaatattttt taaaatataa 180

ctataatgct tcactaatac cttaaaaatg cctagtgaac taactcagta cattatataa 240

tggccaagtg aaagttttgt gttttcatgt cctgtttttc tttgaaatta tatagcccag 300

aaattagctc attatctgaa aaacgtatga agaactgatg aattgtataa tacaggagta 360

ttgccattga atgtactgtt tgatttattc aagcaggtaa tgaacaatgt tgtcaaactc 420

tctaatgaga catcataatt aggacataag ctaaaagggg cattactccg gcagtctttt 480

tttcttaatc ctagtaccat acatattctt tggcatgaaa gaatgaaaag cattagtaaa 540

caactgaagt cctaccatgg ctctgtaggg tttttggaac aattcctgga attggaaagt 600

gaaaatggat agcatgtggg ggaaaccctc atctgagtag caagatttta gtaaagatga 660

ctaagccatt aacagcatgc attcatattt aattttattg actcctgcca tcagcttttg 720

tagatcgttt gggtggaagg ttgtgatttt tactgggagg acttgagtag aagtggatga 780

ttaaaattga ggagtatata attctttctg ggactgctta aatgttattg tttgaaaata 840

ccttcacttt ccccctttgg tcaaagagat gtgcttaaaa ttcttattcc ttcacaataa 900

ataattttga ttttcttaga ca 922

<210> 299
<211> 928
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens CNTN1 3'-UTR

CNTN1-004 ENST00000547849

+T at pos. 30bp, mutations G727bpT, A840bpG

<400> 299
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tagatttgac taactcaatc ttgtagcttc tgcagttctc cccaccccca acctagttct 120

tagagtatgt ttccccttt gaaacatgta aacatacttt gggcataaat atttttaaa 180

atataactat aatgcttcac taatacctta aaaatgccta gtgaactaac tcagtacatt 240

atataatggc caagtgaaag ttttgtgttt tcatgtcctg tttttctttg aaattatata 300

gcccagaaat tagctcatta tctgaaaaac gtatgaagaa ctgatgaatt gtataataca 360

ggagtattgc cattgaatgt actgtttgat ttattcaagc aggtaatgaa caatgttgtc 420

aaactctcta atgagacatc ataattagga cataagctaa aaggggcatt actccggcag 480

tctttttttc ttaatcctag taccatacat attctttggc atgaaagaat gaaaagcatt 540

agtaaacaac tgaagtccta ccatggctct gtagggtttt tggaacaatt cctggaattg 600

gaaagtgaaa atggatagca tgtgggggaa accctcatct gagtagcaag attttagtaa 660

agatgactaa gccattaaca gcatgcattc atatttaatt ttattgactc ctgccatcag 720

cttttgtaga tcttttgggt ggaaggttgt gatttttact gggaggactt gagtagaagt 780

ggatgattaa aattgaggag tatataattc tttctgggac tgcttaaatg ttattgtttg 840

aaaatgcctt cactttcccc ctttggtcaa agagatgtgc ttaaaattct tattccttca 900

caataaataa ttttgatttt cttagaca 928

<210> 300
<211> 734
<212> DNA
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<220>
<223> Homo sapiens LMBRD2 3'-UTR

<400> 300
agtctgaaaa agtttgtggg accactaacc aaggtcaaca catcagttca gtcttgatga 60

acatctgtgt accctagaat ttcctctata cacagtgaaa agtgtcaaga taacaaaaaa 120

ggcactgaga attaattata tcttaggaat aatagtttaa tgtgcattga atagagtatc 180

acctttttca acaagattta ttacatatca tttcctaagc atctgcctta gaaatacagt 240

tacagtggaa ggactttaag aaagatcaac atatgttaag aacatgcagt tcagtttgtt 300

tcagattaat ttttttttcaa gagagttatt ttaaagattc aaggaagcca taagtcatac 360

taaataatat tatatacagt tttgttattg tgacttacat ttttgttact tctaaaaagt 420

atattcaacc tgtatttccc aaagaaatgt aagtgaatgg agacctcaaa taataactgt 480

attcataaaa ctcgtgtctt aaaacaaggc ttacttacta gacataactg aatgtaaaaa 540

gtgctttttc aaatctgttt gcaaactcgt gggggatttt tgcatgtata agattaagat 600

tatacttcaa gtgatgcgtg tctgtgtatt tagcatgtgt actataatca ggtgatatag 660

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gattttcatt tcag 734

<210> 301
<211> 241
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TLR3 3'-UTR

NM_003265

<400> 301
atttatttaa atattcaatt agcaaaggag aaactttctc aatttaaaaa gttctatggc 60

aaatttaagt tttccataaa ggtgttataa tttgtttatt catatttgta aatgattata 120

ttctatcaca attacatctc ttctaggaaa atgtgtctcc ttatttcagg cctatttttg 180

acaattgact taattttacc caaaataaaa catataagca cgtaaaaaaa aaaaaaaaaa 240

a 241

<210> 302
<211> 527
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens BCAT1 3'-UTR

BCAT1-002 ENST00000342945

<400> 302
atggaaaata gaggatacaa tggaaaatag aggataccaa ctgtatgcta ctgggacaga 60

ctgttgcatt tgaattgtga tagatttctt tggctacctg tgcataatgt agtttgtagt 120

atcaatgtgt tacaagagtg attgtttctt catgccagag aaaatgaatt gcaatcatca 180

aatggtgttt cataacttgg tagtagtaac ttaccttacc ttacctagaa aaacattaat 240

gtaagccata taacatggga ttttcctcaa tgattttagt gcctcctttt gtacttcact 300

cagatactaa atagtagttt attctttaat ataagttaca ttctgctcct caaacaaatg 360

caatttttg tgtgtgtttg aaagctaatt tgagaaaatt tcataggtta catttcctgc 420

agcctatctt tatccacaga aagtgttttc tttttttaa atcaagactt ttaaaactgg 480

atttcctccc atcactgttt tttgaaggtc ctccaagtcc gtgttaa 527

<210> 303
<211> 199

<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens BCAT1 3'-UTR

<400> 303
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ctgttgcatt tgaattgtga tagatttctt tggctacctg tgcataatgt agtttgtagt 120

atcaatgtgt tacaagagtg attgtttctt catgccagag aaaatgaatt gcaatcatca 180

aatggtgttt cataacttg 199

<210> 304
<211> 716
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens TOM1L1 3'-UTR

TOM1L1-001 ENST00000575882

<400> 304
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ctctgtgcag ctttgaagcc tggaagacaa tacctaccaa catgtcaaag ccatggtggc 120

acatttctgc tataatgaag attaaataga ataacagttc caggataaca ctgattcctg 180

acaacagcgt gagatttcaa cagaacttgt ttggaacaaa tactcactta aaacttcagc 240

agaagaaaaa ttacttagtc cttaggccaa ccaatttaac tgcagtgtca tgtttcacag 300

gccttcctac atttagaaat cgtcacacag ctgtgataag agtagattat tttactatga 360

aataattctg aatagatgaa agcataaaat gtgagaaact gaatgtatta ttcaggaaga 420

atactgagtg ccttcattta actaaagttg aatgtaaaag tcaatttgca cttctttata 480

atcctctggt ttagaattat aaattgttaa aaccttgata attgtcattt aattatattt 540

caggtgtcct gaacaggtca ctagactcta cattgggcag cctttaaata tgattctttg 600

taatgctaaa tagccttttt ttctcttttt actgcaactt aatatttcta tttagaacac 660

agaaaatgaa aatatttaga ataagttgta catttgatga caaataaatc actatt 716

<210> 305
<211> 804
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens SLC35A1 3'-UTR

SLC35A1-201 ENST00000369556

<400> 305
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agtcaatctc agaaggtagc ataaacaaat aaaaattaac tgtatggcat gatcagtgcg 120

gttatgtgga aacaacaaca aacaaacgaa gctatctgag tgaactgcta atacagaaac 180

ttaatgtaga cctgtttggg gtctactatt gttttagaat gaaggaattg tattattgtg 240

tgtatatata atttgtaaat aaaaagtatg gagatgatac ggtgttaaaa aaaatcatgg 300

taaggctaca atactcaagt aacaaggttt gggacaatgt ctaagggtta aagtgccaaa 360

gccatttctg tactaactgt tctcttgttc cggtaccggg gagaaggatg acccctcctt 420

attctccaat tcatgtacag tattttgtcc tagcagcata aagacctagc tcttttctta 480

caagaggcag aaacaagaca ggctagttca taaacaaact gtgtaacttc tcaaaatgaa 540

tctatttcat aactcggaca atttctgggt ggtgactgag tacccttta gtgagtaccc 600

ctttagtgct atatttgtgc cattcattat ctggttcata tttcttttct gttagatgat 660

acacatttct tcaaaaaaat ttctaatgtc acttttgtac ttttttaaat aaagtatgtt 720

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aattcagcaa taaactttat ttgt 804

<210> 306
<211> 332
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens GLYATL2 3'-UTR

GLYATL2-003 ENST00000532258

<400> 306
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agcattgtga tctacattag cacaaaatgc aactgattat ctaggatctg tgtattactt 120

aagctcaccc ttaacagttt taccttcctt ctcctctgta ttcttacaga aaattagaag 180

ctcaatttta tggtctcata atttccttta tgacagacat ctcagaatta aaatcaccca 240

aagccaatca ttagtgccaa gataaccctt taacggcaac actttcttaa atgaagacta 300

tttctttcat gaaaaaattc acttttatga ct 332

<210> 307
<211> 260
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens STAT4 3'-UTR

STAT4-002 ENST00000392320

<400> 307
caggataaac tctgacgcac caagaaagga agcaaatgaa aaagtttaaa gactgttctt 60

tgcccaataa ccacatttta tttcttcagc tttgtaaata ccaggttcta ggaaatgttt 120

gacatctgaa gctctcttca cactcccgtg gcactcctca attgggagtg ttgtgactga 180

aatgcttgaa accaaagctt cagataaact tgcaagataa gacaacttta agaaaccagt 240

gttaataaca atattaacag 260

<210> 308
<211> 270
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens GULP1 3'-UTR

GULP1-002 ENST00000409609

<400> 308
catcaagaac aagaaatcct gattcatgtt aaatgtgttt gtatacacat gtcatttatt 60

attattactt taagataggt attattcatg tgtcaatgtt tttgaatatt ttaatatttt 120

gaaaattttc tcagttaaat ttcctcacct tcactattga tctgtaattt ttattttaaa 180

aacagcttac tgtaaagtag atcatacttt tatgttcctt tctgtttcta ctgtagatga 240

atttgtaatt gaaagacata ttatacaaat 270

<210> 309
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens GULP1 3'-UTR

GULP1-010 ENST00000409805

<400> 309
catcaagaac aagaaatcct gattcatgtt aaatgtgttt gtatacacat gtcatttatt 60

attattactt taagatagg 79

<210> 310
<211> 256
<212> DNA
<213> Artificial Sequence

<220>
<223> Homo sapiens EHHADH 3'-UTR

EHHADH-002 ENST00000456310

<400> 310
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gaaattaaat caaaaatcca aagtaagatt gttctgaaat acaaagcaaa ataaataatc 120

attagaatct tctgtgtaac gactctaatg gtcaaatctt taggaatgtg cttcctatgc 180

ctctgaatct gtccttatca gataaattca atgcatgaac ttgtgtgaat ataataccat 240

aatagctaat gaaaga 256

<210> 311
<211> 640
<212> DNA
<213> Artificial Sequence

<220>

<223> Homo sapiens NBEAL1 3'-UTR

NM_001114132.1

<400> 311
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ccacatctct caactctctg caatgttgca aggcttttat ccctgaaaat catttacaga 120

taaccacaat ttgctgtggt atataaacta attcttggtc tatactaaga tgtatttgag 180

aaaatacatt tgatttgatt ttgtggccca ttcctaaagg tcattgtatc catttttaaa 240

acaaactaaa atgagaacat taggttcaat tttcttatta ttccaaatga taaaatttaa 300

gatttttcta ataaaagagt acagataatg ggacagttga gagagatggc tttaaataca 360

ttcttaagta atcattttcc tatttactga ccactgtaat gaaaatatat caatttattt 420

atggaactcc tgattgggga taatatttta aaggtatctg ttgcacactt ggattttcaa 480

aactcggtga aagttacaag tttgcatggt aagaataaaa taagaatatt gaaactggta 540

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NM_001258299.1

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aatatgtgtt gaattgacag tgaaaaggat ccatgtgttg acagacacag ttgttagatg 180

ccataaaggc agatgtgaag ctcaatttat ttctcatctt gcttg 225

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gaactccttg attttagcct tctctgttca tttcctcaaa aagatttccc catttaggtt 180

tctgagttcc tgcatgccgg tgatccctag ctgtgacctc tcccctggaa ctgtctctca 240

tgaacctcaa gctgcatcta gaggcttcct tcatttcctc cgtcacctca gagacataca 300

cctatgtcat ttcatttcct atttttggaa gaggactcct taaatttggg ggacttacat 360

gattcatttt aacatctgag aaaagctttg aaccctggga cgtggctagt cataacctta 420

ccagattttt acacatgtat ctatgcattt tctggacccg ttcaactttt cctttgaatc 480

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aggcaaatat cttgaaaggg gttgtgaaga ggtgtttttt ctaattggca tgaaggtgtc 720

atacagattt gcaaagttta atggtgcctt catttgggat gctactctag tattccagac 780

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gaactccttg attttagcct tctctgttca tttcctcaaa aagatttccc catttaggtt 180

tctgagttcc tgcatgccgg tgatccctag ctgtgacctc tcccctggaa ctgtctctca 240

tgaacctcaa gctgcatcta gaggcttcct tcatttcctc cgtcacctca gagacataca 300

cctatgtcat ttcatttcct atttttggaa gaggactcct taaatttggg ggacttacat 360

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ccagattttt acacatgtat ctatgcattt tctggacccg ttcaactttt cctttgaatc 480

ctctctctgt gttacccagt aactcatctg tcaccaagcc ttggggattc ttccatctga 540

ttgtgatgtg agttgcacag ctatgaaggc tgtacactgc acgaatggaa gaggcacctg 600

tcccagaaaa agcatcatgg ctatctgtgg gtagtatgat gggtgttttt agcaggtagg 660

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

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HFE-012 ENST00000336625

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<210> 317
<211> 394
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KIAA1324L-005 ENST00000416314

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gccgctgaaa agggaaggag attgaaacat ttgattgcct tatcacatgg tcaagtacct 180

tgccaaataa aggaaagcaa atgatttggg tctcaactga agatgaagct caactcagga 240

agagatttat ctgtatatac acataactga aaaccaagtt taagcccacc aatgcactgc 300

tgatgcatgc catataatta atgggtaact tttattcttt atgatgtcta cataacaagt 360

gtgatttgga aggcacatgt gagcatatgc atta 394

<210> 318
<211> 743
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tgctttcctt ttttttttt ggagacagag tcttgctttg ttgcccaggc tggagtgcag 180

tagcacgatc tcggctctca ccgcaacctc cgtctcctgg gttcaagcga ttctcctgcc 240

tcagcctcct aagtatctgg gattacaggc atgtgccacc acacctgggt gatttttgta 300

tttttagtag agacggggtt tcaccatgtt ggtcaggctg gtctcaaact cctgacctag 360

tgatccaccc tcctcggcct cccaaagtgc tgggattaca ggcatgagcc accacagctg 420

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agtataattg ccatataaat ttcaaaattc aactggcttt tatgcaaaga aacaggttag 600

gacatctagg ttccaattca ttcacattct tggttccaga taaaatcaac tgtttatatc 660

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<211> 142
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LTA4H-001 ENST00000228740

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ctcctcctca ggttctctat cgacgagtct ggtagctgag cgttgggctg taggtcgctg 120

tgctgtgtga tcccccagag cc 142

<210> 320
<211> 88
<212> DNA
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<223> Homo sapiens DECR1 5'-UTR

DECR1-001 ENST00000220764

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cttccggccc gagttctgga gactcaac 88

<210> 321
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<212> DNA
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<223> Homo sapiens PIGK 5'-UTR

<400> 321
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<210> 322
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<212> DNA
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BRP44L-001

<400> 322
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cattggctct gggaagcggc agcagaggca gggaccactc ggggtctggt gtcggcacag 120

cc 122

<210> 323
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<212> DNA
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<220>
<223> Homo sapiens ACADSB 5'-UTR

ACADSB-004 NM_001609.3 ENST00000368869

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actcccaggg gctggctaga gacccagagg cgcagagcgg agaggcctgc ggcgagg 117

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<211> 166
<212> DNA
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<220>
<223> Homo sapiens SUPT3H 5'-UTR

SUPT3H-006 ENST00000371459

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tttccaagcg tgtcccgggc cgcagcagca gaaaccgcac catctccacc cccacattct 120

cctcgcggga agcgcagcag tgcctccaag ggttcttaaa gcagag 166

<210> 325
<211> 176
<212> DNA
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NM_014051.3

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gctggtgcgg agactgcttc cggactccag gtaccgcgct tggcggcagc tggccccaga 120

cttctgtctt ttcagctgca gtgaaggctc ggggctgcag aattgcaacc ttgcca 176

<210> 326
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AF225420.1

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gtcgcctggt cccggcacca gcgccgccca gtgtggtttc ccataaggaa gctcttcttc 120

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caagtccaga cccaggagag caaggcccag aaagaggtca aa 222

<210> 327
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NM_001153.3

<400> 327
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ggaacttggg ctcagtctcc accccacagt ggggcggatc cgtcccggat aagacccgct 120

gtctggccct gagtagggtg tgacctccgc agccgcagag gaggagcgca gcccggcctc 180

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gctgaagatt gcttctcttc tctcctccaa ggtctagtga cggagcccgc gcgcggcgcc 120

acc 123

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<211> 58
<212> DNA
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CAMKMT -008 ENST00000402247

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<210> 330
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<212> DNA
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NM_024766.3

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gagctgcggc ggtggcacct ccgggtgtgg aaggctccag tgag 104

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ALDH6A1-002 ENST00000350259

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<210> 332
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CCDC53-002 ENST00000545679

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gggccccatc tgggaggggt ttgtgggtga actcggggtc caccgcccgc tgaggag 117

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NM_001257119.1

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<210> 334
<211> 124

<212> DNA
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NM_182739.2

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cttaagtaac tagtccgtag ttcgagggtg cgccgtgtcc ttttgcgttg gtaccagcgg 120

cgac 124

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BCKDHB-002 ENST00000369760

<400> 335
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<211> 39
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NM_001164783.1

<400> 336
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<210> 337
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<223> Homo sapiens BBS2 5'-UTR

NM_031885.3

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cgcaggagga gcaggcggta cctggacggg ttcgtcccgg gctgtttcgc gtccggcctg 120

aggcggctgg ggccgcgcag gtagtgtccc tgcacttctt gcccgggcgc gtgaggccag 180

ctccgctgcg cttgtctcca gcttccagcc ctcctcccct aagccgccgc catc 234

<210> 338
<211> 153
<212> DNA
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<220>
<223> Homo sapiens HERC5 5'-UTR

HERC5-001 ENST00000264350

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tcgcctctgg gcctgggacc ccgcaaagcg gcg 153

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NM_139076.2

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gtagc 65

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NT5DC1-002 ENST00000319550

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ccctggtgct ccccgcgcag cc 82

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RAB7A-001 ENST00000265062

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gagtcttggc cataaagcct gaggcggcgg cagcggcgga gttggcggct tggagagctc 120

gggagagttc cctggaacca gaacttggac cttctcgctt ctgtcctccg tttagtctcc 180

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tgaagg 246

<210> 342
<211> 128
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AGA-001 ENST00000264595

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ggtcaggg 128

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TPK1-001 ENST00000360057

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cagtctgtgg ctcctaccag ccattgtagg ccaataatcc gtt 103

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MBNL3-001 ENST00000370839

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ttttaatttt gctttcaat 79

<210> 345
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MCCC2-001 ENST00000340941

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gggaagcggc aggggaaagc accggctcca ggccagcgtg ggccgctctc tcgctcggtg 120

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<210> 346
<211> 89
<212> DNA
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CAT-001 ENST00000241052

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gcagtgttct gcacagcaaa ccgcacgct 89

<210> 347
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ANAPC4-001 ENST00000315368

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ggactcttgc agggccgtcc cc 142

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PHKB-002 ENST00000323584

<400> 348
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<210> 349
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ABCB7-001 ENST00000253577

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<223> Homo sapiens GPD2 5'-UTR

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<210> 351
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TMEM38B-001 ENST00000374692

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NM_001002755.2

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gtaggccacc gcacttatcc gcagcaggac cgcccgcagc cggtagggtg ggctcttccc 120

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<212> DNA
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NM_005796.1

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agcccctcgg gtctccgtga ggccgggtga cgctccaga 99

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<212> DNA
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<223> Homo sapiens NUBPL 5'-UTR

NM_025152.2

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<210> 355
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<212> DNA
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LANCL1-004 ENST00000233714

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cttgcttccg gcgtc 75

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PIR-002 ENST00000380420

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ccacactctc ttaacctgcc ctccctgcac tcgctcccgg cggctcttcg cgtcaccccc 120

gccgctaagg ctccaggtgc cgctaccgca gcccctccat cctctacagc tcagcatcag 180

aacactctct ttttagactc cgat 204

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<211> 65
<212> DNA
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<223> Homo sapiens CTBS 5'-UTR

NM_004388.2

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ctgct 65

<210> 358
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<212> DNA
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<223> Homo sapiens GSTM4 5'-UTR

NM_000850.4

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gtggcggtgg atcttactcc ttccagccag tgaggatcca gcaacctgct ccgtgcctcc 120

cgcgcctgtt ggttggaagt gacgaccttg aagatcggcc ggttggaagt gacgaccttg 180

aagatcggcg ggcgcagcgg ggccgagggg gcgggtctgg cgctaggtcc agcccctgcg 240

tgccgggaac cccagaggag gtcgcagttc agcccagctg aggcctgtct gcagaatcga 300

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<211> 73
<212> DNA
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<220>
<223> Mus musculus Ndufa1 5'-UTR

Ndufa1-001 ENSMUST00000016571

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taacggtgcg gag 73

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gatcaaagct gcaggagg 78

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NM_023202

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NM_007507

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NM_009941

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tggcaga 67

<210> 367
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NM_010888

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ctcctgtgcc caccgttctt aggcatcagc 90

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NM_026943

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NM_025569

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NM_027360

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NM_016764

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gcagagggac gtgttttcgc gcttgcttgg tc 92

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agcctcgtga tcaggaagaa aagcaactag gaaca 215

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NM_001163425

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NM_010358

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tgggattggt gcagggttgg gagggacccg ctgttttgtc ctgcccacgt ttctctagta 120

gtctgtataa agtcacaact ccaaacacac aggtcagtcc tgctgaagcc agtttgagaa 180

gaccacagca ccagcacc 198

<210> 378
<211> 75
<212> DNA
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NM_138597

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gccgcccggg aaaag 75

<210> 379
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<223> Mus musculus Tspo 5'-UTR

NM_009775

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gcggggctgt ggatctttcc agaacatcag ttgcaatcac c 101

<210> 380
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<212> DNA
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<223> Mus musculus Taldo1 5'-UTR

NM_011528

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cc 62

<210> 381
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<220>
<223> Mus musculus Bloc1s1 5'-UTR

NM_015740

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<212> DNA
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NM_010421

<400> 382
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<210> 383
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ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180

guacuucgag augagcgugc gccuggccga ggccaugaag cgguacggcc ugaacaccaa 240

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ccucuucauc ggcguggccg ucgccccggc gaacgacauc uacaacgagc gggagcugcu 360

gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420

gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480

gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540

cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600

caugaacagc agcggcagca ccggccugcc gaagggggug gcccugccgc accggaccgc 660

cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720

cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780

ccucaucugc ggcuuccggg ugguccugau guaccgguuc gaggaggagc uguuccugcg 840

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cgccaagagc acccugaucg acaaguacga ccugucgaac cugcacgaga ucgccagcgg 960

gggcgccccg cugagcaagg aggugggcga ggccguggcc aagcgguucc accucccggg 1020

cauccgccag ggcuacggcc ugaccgagac cacgagcgcg auccugauca cccccgaggg 1080

ggacgacaag ccgggcgccg ugggcaaggu ggucccguuc uucgaggcca agguggugga 1140

ccuggacacc ggcaagaccc ugggcgugaa ccagcggggc gagcugugcg ugcgggggcc 1200

gaugaucaug agcggcuacg ugaacaaccc ggaggccacc aacgcccuca ucgacaagga 1260

cggcuggcug cacagcggcg acaucgccua cugggacgag gacgagcacu ucuucaucgu 1320

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gagcauccug cuccagcacc ccaacaucuu cgacgccggc guggccgggc ugccggacga 1440

cgacgccggc gagcugccgg ccgcgguggu ggugcuggag cacggcaaga ccaugacgga 1500

gaaggagauc gucgacuacg uggccagcca ggugaccacc gccaagaagc ugcggggcgg 1560

cgugguguuc guggacgagg ucccgaaggg ccugaccggg aagcucgacg cccggaagau 1620

ccgcgagauc cugaucaagg ccaagaaggg cggcaagauc gccguguaag acuaguagau 1680

cuaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1740

aaaaaaugca uccccccccc cccccccccc cccccccccc ccaaaggcuc uuuucagagc 1800

caccagaauu 1810

<210> 384
<211> 1927
<212> RNA
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ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180
guacuucgag augagcgugc gccuggccga ggccaugaag cgguacggcc ugaacaccaa 240
ccaccggauc guggugugcu cggagaacag ccugcaguuc uucaugccgg ugcugggcgc 300
ccucuucauc ggcguggccg ucgccccggc gaacgacauc uacaacgagc gggagcugcu 360
gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420
gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480
gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540
cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600
caugaacagc agcggcagca ccggccugcc gaagggggug gcccugccgc accggaccgc 660
cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720
cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780
ccucaucugc ggcuuccggg ugguccugau guaccgguuc gaggaggagc uguuccugcg 840
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gaugaucaug agcggcuacg ugaacaaccc ggaggccacc aacgcccuca ucgacaagga 1260
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gcugccuuaa cgcugagaug uggccucugc aacccccccuu aggcaaagca acugaaccuu 1740
cugcuaaagu gaccugcccu cuuccguaag uccaauaaag uugucaugca cccagaucua 1800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860
aaaugcaucc ccccccccccc ccccccccccc ccccccccca aaggcucuuu ucagagccac 1920
cagaauu 1927

<210> 385
<211> 1943
<212> RNA
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<220>
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ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180

guacuucgag augagcgugc gccuggccga ggccaugaag cgguacggcc ugaacaccaa 240

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ccucuucauc ggcguggccg ucgccccggc gaacgacauc uacaacgagc gggagcugcu 360

gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420

gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480

gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540

cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600

caugaacagc agcggcagca ccggccugcc gaagggggug gcccugccgc accggaccgc 660

cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720

cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780

ccucaucugc ggcuuccggg ugguccugau guaccgguuc gaggaggagc uguuccugcg 840

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cgccaagagc acccugaucg acaaguacga ccugucgaac cugcacgaga ucgccagcgg 960

gggcgccccg cugagcaagg aggugggcga ggccguggcc aagcgguucc accucccggg 1020

cauccgccag ggcuacggcc ugaccgagac cacgagcgcg auccugauca cccccgaggg 1080

ggacgacaag ccgggcgccg ugggcaaggu ggucccguuc uucgaggcca agguggugga 1140

ccuggacacc ggcaagaccc ugggcgugaa ccagcggggc gagcugugcg ugcgggggcc 1200

gaugaucaug agcggcuacg ugaacaaccc ggaggccacc aacgcccuca ucgacaagga 1260

cggcuggcug cacagcggcg acaucgccua cugggacgag gacgagcacu ucuucaucgu 1320

cgaccggcug aagucgcuga ucaaguacaa gggcuaccag guggcgccgg ccgagcugga 1380

gagcauccug cuccagcacc ccaacaucuu cgacgccggc guggccgggc ugccggacga 1440

cgacgccggc gagcugccgg ccgcgguggu ggugcuggag cacggcaaga ccaugacgga 1500

gaaggagauc gucgacuacg uggccagcca ggugaccacc gccaagaagc ugcggggcgg 1560

cgugguguuc guggacgagg ucccgaaggg ccugaccggg aagcucgacg cccggaagau 1620

ccgcgagauc cugaucaagg ccaagaaggg cggcaagauc gccguguaag acuaguggaa 1680

gcauuuuccu ggcugauuaa aagaaauuac ucagcuaugg ucaucuguuc cuguuagaag 1740

gcuaugcagc auauuauaua cuaugcgcau guuaugaaau gcauaauaaa aaauuuuaaa 1800

aaaucuaaaa gaucuaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860

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<210> 386
<211> 1941
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ggugccgggc acgaucgccu ucaccgacgc ccacaucgag gucgacauca ccuacgcgga 180

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gaacagcaug gggaucagcc agccgaccgu gguguucgug agcaagaagg gccugcagaa 420

gauccugaac gugcagaaga agcugcccau cauccagaag aucaucauca uggacagcaa 480

gaccgacuac cagggcuucc agucgaugua cacguucgug accagccacc ucccgccggg 540

cuucaacgag uacgacuucg ucccggagag cuucgaccgg gacaagacca ucgcccugau 600

caugaacagc agcggcagca ccggccugcc gaagggggug gcccugccgc accggaccgc 660

cugcgugcgc uucucgcacg cccgggaccc caucuucggc aaccagauca ucccggacac 720

cgccauccug agcguggugc cguuccacca cggcuucggc auguucacga cccugggcua 780

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cgccaagagc acccugaucg acaaguacga ccugucgaac cugcacgaga ucgccagcgg 960

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cauccgccag ggcuacggcc ugaccgagac cacgagcgcg auccugauca cccccgaggg 1080

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ccuggacacc ggcaagaccc ugggcgugaa ccagcggggc gagcugugcg ugcgggggcc 1200

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gagcauccug cuccagcacc ccaacaucuu cgacgccggc guggccgggc ugccggacga 1440

cgacgccggc gagcugccgg ccgcgguggu ggugcuggag cacggcaaga ccaugacgga 1500

gaaggagauc gucgacuacg uggccagcca ggugaccacc gccaagaagc ugcggggcgg 1560

cgugguguuc guggacgagg ucccgaaggg ccugaccggg aagcucgacg cccggaagau 1620

ccgcgagauc cugaucaagg ccaagaaggg cggcaagauc gccguguaag acuaguggaa 1680

gcauuuuccu gauugaugaa aaaaauaacu caguuauggc caucuacccc ugcuagaagg 1740

uuacagugua uuauguagca ugcaaugugu uauguagugc uuaauaaaaa uaaaaugaaa 1800

aaaaugcaga ucuaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860

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<210> 387
<211> 1861
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ggacgggacc gccggcgagc agcuccacaa ggccaugaag cgguacgccc uggugccggg 180

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cggcguggcc gucgccccgg cgaacgacau cuacaacgag cgggagcugc ugaacagcau 420

ggggaucagc cagccgaccg ugguguucgu gagcaagaag ggccugcaga agauccugaa 480

cgugcagaag aagcugccca ucauccagaa gaucaucauc auggacagca agaccgacua 540

ccagggcuuc cagucgaugu acacguucgu gaccagccac cucccgccgg gcuucaacga 600

guacgacuuc gucccggaga gcuucgaccg ggacaagacc aucgcccuga ucaugaacag 660

cagcggcagc accggccugc cgaagggggu ggcccugccg caccggaccg ccugcgugcg 720

cuucucgcac gcccgggacc ccaucuucgg caaccagauc aucccggaca ccgccauccu 780

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ggacuacaag auccagagcg cgcugcucgu gccgacccug uucagcuucu ucgccaagag 960

cacccugauc gacaaguacg accugucgaa ccugcacgag aucgccagcg ggggcgcccc 1020

gcugagcaag gaggugggcg aggccguggc caagcgguuc caccucccgg gcauccgcca 1080

gggcuacggc cugaccgaga ccacgagcgc gauccugauc acccccgagg gggacgacaa 1140

gccgggcgcc gugggcaagg uggucccguu cuucgaggcc aagguggugg accuggacac 1200

cggcaagacc cugggcguga accagcgggg cgagcugugc gugcgggggc cgaugaucau 1260

gagcggcuac gugaacaacc cggaggccac caacgcccuc aucgacaagg acggcuggcu 1320

gcacagcggc gacaucgccu acugggacga ggacgagcac uucuucaucg ucgaccggcu 1380

gaagucgcug aucaaguaca agggcuacca gguggcgccg gccgagcugg agagcauccu 1440

gcuccagcac cccaacaucu ucgacgccgg cguggccggg cugccggacg acgacgccgg 1500

cgagcugccg gccgcggugg uggugcugga gcacggcaag accaugacgg agaaggagau 1560

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ccugaucaag gccaagaagg gcggcaagau cgccguguaa gacuaguaga ucuaaaaaaa 1740

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<210> 388
<211> 1888
<212> RNA
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