SEQUENCE LISTING

<110> Juno Therapeutics, Inc.
Tareen, Semih

<120> MODIFIED HEPATITIS POST-TRANSCRIPTIONAL REGULATORY ELEMENTS (PRES) FOR ENHANCED GENE EXPRESSION

<130> 735042001840

<140> Not Yet Assigned
<141> Concurrently Herewith

<160> 221

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

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<210> 2
<211> 3323
<212> DNA
<213> Woodchuck hepatitis virus

<400> 2
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<210> 3
<211> 80
<212> DNA
<213> Woodchuck hepatitis virus

<400> 3
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ggcactgaca attccgtggt 80

<210> 4
<211> 208
<212> DNA
<213> Woodchuck hepatitis virus

<400> 4
gtgtgcactg tgtttgctga cgcaacccca actggttggg gcattgccac cacctgtcag 60
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tgccttgccc gctgctggac aggggctcgg ctgttgggca ctgacaattc cgtggtgttg 180
tcggggaagc tgacgtcctt tccatggc 208

<210> 5
<211> 38
<212> DNA
<213> Woodchuck hepatitis virus

<400> 5
gccttgcccg ctgctggaca ggggctcggc tgttgggc 38

<210> 6
<211> 177
<212> DNA
<213> Woodchuck hepatitis virus

<400> 6
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<210> 7
<211> 23
<212> DNA
<213> Woodchuck hepatitis virus

<400> 7
gggacgtcct tctgctacgt ccc 23

<210> 8
<211> 158
<212> DNA
<213> Woodchuck hepatitis virus

<400> 8
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggtt 158

<210> 9
<211> 426
<212> DNA
<213> Woodchuck hepatitis virus

<400> 9
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attgatccta gattatcaat atttgtatta ggaggctgta ggcataaatg catgcgactt 420
ctgtaa 426

<210> 10
<211> 182
<212> DNA
<213> Woodchuck hepatitis virus

<400> 10
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 11
<211> 21
<212> DNA
<213> Woodchuck hepatitis virus

<400> 11
ggggaagctg acgtcctttc c 21

<210> 12
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 12
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cgctttcggc ctccgacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 13
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 13
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 14
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 14
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<210> 15
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 15
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<210> 16
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 16
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<210> 17
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 17
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<210> 18
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 18
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<210> 19
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 19
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<210> 20
<211> 592
<212> DNA
<213> Woodchuck hepatitis virus

<400> 20
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cgctttcggc ctccgacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 21
<211> 722
<212> DNA
<213> Human hepatitis B virus

<400> 21
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aacgcccacc ggaacctgcc caaggtcttg cataagagga ctcttggact ttcagcaatg 720
tc 722

<210> 22
<211> 722
<212> DNA
<213> Human hepatitis B virus

<400> 22
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tc 722

<210> 23
<211> 722
<212> DNA
<213> Orangutan hepatitis B virus

<400> 23
caacaggcct attgattgga aagtatgtca acgaattgta ggactattgg gctttgccgc 60
tccttttact caatgtggct atcctgcttt aatgcctttg tataactgta tacacaatcg 120
tcaggctttt actttctcgc caacttacaa ggcctttctg cgtacacaat atctgaccct 180
ttaccccgtt gctcggcaac gaccgggact gtgccaagtg tttgctgacg caacccccac 240
tggctggggc ttggcgctag gtccccagcg catgcgtgga acctttgtgg ctcctctgcc 300
gatccatact gcggaactcc tagccgcttg ttttgctcgc agcaggtctg gagcaaacat 360
tatcggtact gacaactctg ttgtgttgtc gcggaaatat acatcttttc catggctgct 420
aggttgtgct gccaactgga tactgcgcgg gacgtccttt gtctacgtcc cgtcggcgct 480
gaatcccgcg gacgaccctt ctcggggtcg gttggggctc taccgccctc ttctccgcct 540
gccgttccgg ccgaccacgg ggcgcacctc tctttacgcg gtctccccgt ctgtgccttc 600
tcatctgccg gtccgtgtgc acttcgcttc acctctgcac gttgcatgga gaccaccgtg 660
aacgcccccc ggaacttgcc aaaggtcttg cataagagga ctcttggact gtcaacaatg 720
tc 722

<210> 24
<211> 721
<212> DNA
<213> Chimpanzee hepatitis B virus

<400> 24

aacagaccta tagattggaa agtatgtcaa agaattgtgg gtcttttggg atttgctgcc 60
ccttttacgc aatgtggtta tcctgcgtta atgccattgt atgcatgtat acaagcaaaa 120
caggctttca ctttctcgcc aacttataag gcctttctaa gtcaacaata ttcgaccctt 180
taccccgttg cccggcaacg gtccggtctg tgccaagtgt ttgctgacgc aacccccact 240
ggctggggct tggtcatggg ccatcagcgc atgcgtggaa cctttgtggc tcctctgccg 300
atccatactg cggaactcct agcagcttgt tttgctcgca gccggtctgg agcaaaactt 360
atcggaactg acaattctgt cgtcctctct cggaaatata catcttttcc atggctgcta 420
ggttgtgctg ccaactggat acttcgcggg acgtcctttg tttacgtccc gtcggcgctg 480
aatcctgcgg acgacccttc tcggggccgc ttagggctct accgccctct catccgtctg 540
ctcttccaac cgactacggg gcgcacctct ctttacgcgg tctccccgtc tgtgccttct 600
catctgccgg tccgtgtgca cttcgcttca cctctgcacg ttgcatggag accaccgtga 660
acgccccacg gaacctgcca aaagtcttgc ataagaggac tcttggactt tcagcaatgt 720
c 721

<210> 25
<211> 721
<212> DNA
<213> Gorilla hepatitis B virus

<400> 25
aacagaccta ttgattggaa ggtatgtcaa agaattgtgg gtcttttagg atttgctgcc 60
ccttttacac aatgtggtta tcctgccttg atgcctttgt atgcatgtat acaagctaag 120
caggctttca ctttctcgcc aatttacaag gcctttctaa gtaaacaata tgcaaccctt 180
taccccgttg ctcggcaacg ggccggtctg tgccaagtgt ttgctgacgc aacccccact 240
ggytggggct tggtcatagg ccagcagcgc atgcgtggaa cctttgtggc tcctctgccg 300
atccatactg cggaactcct agcagcttgt tttgctcgca gcaggtctgg ggcaaacatt 360
atcgggactg acaattctgt cgtcctttca cggaaatata catcctttcc atggctgcta 420
ggctgtgctg ccaactggat cctgcgcggg acgtcctttg tttacgtccc gtcggcgctg 480
aaccctgccg acgacccgtc tcggggtcgc ttaggactct cccgtcctct ctgccgtctg 540
ccgttccagc cgaccacggg gcgcacctct ctttacgcgg tctccccgtc tgtgccttct 600
catctgccgg accgtgtgca cttcgcttca cctctgcacg ttgcatggag accaccgtga 660
acgcccctcg gaacctgcca acagtcttac ataagaggac tcttggactt tcagcaatgt 720
c 721

<210> 26
<211> 582
<212> DNA
<213> Artic ground squirrel hepatitis B virus

<400> 26
aacctttaga ttataaaatc tgtgaaaggt taacaggcat tctgaattat gttgctcctt 60
ttactaaatg tggttatgct gctctccttc ctttgtatca agctacttcg cgtacggcat 120
ttgtgttttc ttctctctac cacagctggt tgctgtccct ttatgctgag ttgtggcctg 180
ttgccaggca acgtggcgtg gtgtgctctg tgtctgacgc aacccccact ggttggggca 240
tttgcaccac ctatcaactc atttccccga cgggcgcttt tgccctgccg atcgccaccg 300
cggacgtcat cgccgcctgc cttgctcgct gctggacagg agctcggctg ttgggcactg 360
acaactccgt ggttctttcg ggcaaactga cttcctatcc atggctgctc gcctgtgttg 420
ccaactggat tcttcgcggg acgtcgttct gctacgtccc ttcggcagcg aatccggcgg 480
acctgccgtc tcgaggcctt ctgccggctc tgcatcccgt gccgactctc cgcttccgtc 540
cgcagctgag tcgcatctcc ctttgggccg cctccccgcc tg 582

<210> 27
<211> 592
<212> DNA
<213> Ground squirrel hepatitis B virus

<400> 27
aatcaaccct tagattataa aatatgtgaa aggttgacgg gcattcttaa ttatgttgct 60
ccttttacca aatgtggtta tgctgcttta ctgcctttat atcaagctat tgcttctcat 120
actgcttttg ttttctcctc cttatataaa aactggttac tgtcacttta tggtgagttg 180
tggcccgttg ccagacaacg tggtgtggtg tgctctgtgt ttgctgacgc aactcccact 240
ggttggggca tttgcaccac ctgtcaactc atttccggta ctttcggttt ctcacttccg 300
attgctaccg cggagcttat agccgcctgc cttgctcgct gctggacagg agctcggttg 360
ttgggcactg ataactccgt ggtcctctcc ggtaagctaa cttcgtttcc atggctgctc 420
gcctgtgttg ccaactggat tcttcgcggg acgtccttct gttacgtccc ctccgcggac 480
aacccagcgg accttccgtc tcggggactt ctgccggctc tccgtcctct gccgcttctg 540
cgttttcgtc cggtcaccaa gcggatatcc ctgtgggccg cctccccgcc tg 592

<210> 28
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified portion of X protein ORF

<400> 28
atggctgctt agctgagtag ctga 24

<210> 29
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH FOUR STOP CODONS (1,2,3,4)

<400> 29
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 30
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH THREE STOP CODONS (1,2,3)

<400> 30
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 31
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH THREE STOP CODONS (1,2,4)

<400> 31
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480

aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 32
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH THREE STOP CODONS (1,3,4)

<400> 32
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 33
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH THREE STOP CODONS (2,3,4)

<400> 33
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 34
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (1,2)

<400> 34
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 35
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (1,3)

<400> 35
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg   592

<210> 36
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (1,4)

<400> 36
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg   592

<210> 37
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (2,3)

<400> 37
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg   592

<210> 38
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (2,4)

<400> 38
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240

ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 39
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH TWO STOP CODONS (3,4)

<400> 39
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 40
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH ONE STOP CODON (1)

<400> 40
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 41
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH ONE STOP CODON (2)

<400> 41
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 42

<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH ONE STOP CODON (3)

<400> 42
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 43
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH ONE STOP CODON (4)

<400> 43
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 44
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH FOUR STOP CODONS (1,2,3,4)

<400> 44
atggctgctt agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 45
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE THREE STOP CODONS (1,2,3)

<400> 45
atggctgctt agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 46

<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE THREE STOP CODONS (1,2,4)

<400> 46
atggctgctt agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 47
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH THREE STOP CODONS (1,3,4)

<400> 47
atggctgctt agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 48
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH THREE STOP CODONS (2,3,4)

<400> 48
atggctgctc gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 49
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (1,2)

<400> 49
atggctgctt agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 50
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (1,3)

<400> 50
atggctgctt agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 51
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (1,4)

<400> 51
atggctgctt agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 52
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (2,3)

<400> 52
atggctgctc gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 53
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (2,4)

<400> 53
atggctgctc gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 54
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH TWO STOP CODONS (3,4)

<400> 54
atggctgctc gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 55
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH ONE STOP CODON (1)

<400> 55
atggctgctt agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120

tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 56
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH ONE STOP CODON (2)

<400> 56
atggctgctc gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 57
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH ONE STOP CODON (3)

<400> 57
atggctgctc gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 58
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH ONE STOP CODON (4)

<400> 58
atggctgctc gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 59
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 59
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 60
<211> 592
<212> DNA

<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 60
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 61
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 61
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 62
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 62
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 63
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 63
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120

atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 64
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 64
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 65
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 65
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 66
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 66
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 67
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 67
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 68
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 68
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 69
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 69
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 70
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 70
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 71
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 71
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 72
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP

<400> 72
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 73
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 73
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360

ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 74
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 74
ggggctgctt agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 75
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 75
ggggctgctt agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 76
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 76
ggggctgctt agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 77
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 77
ggggctgctt agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 78
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 78
ggggctgctc gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 79
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 79
ggggctgctt agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 80
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 80
ggggctgctt agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 81
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 81
ggggctgctt agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 82
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 82
ggggctgctc gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 83
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 83
ggggctgctc gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 84
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 84
ggggctgctc gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 85
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 85
ggggctgctt agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 86
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 86
ggggctgctc gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 87
<211> 182
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 87
ggggctgctc gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 88
<211> 182
<212> DNA

<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP CODONS

<400> 88
ggggctgctc gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc 180
tg 182

<210> 89
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 89
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 90
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 90
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 91
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 91
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480

aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 92
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 92
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 93
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 93
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 94
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 94
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 95
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 95
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 96
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 96
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 97
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 97
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 98
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 98
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240

ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 99
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 99
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 100
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 100
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 101
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 101
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 102

<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 102
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 103
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 103
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 104
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 104
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 105
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 105

aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 106
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 106
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 107
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 107
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 108
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 108
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480

aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 109
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 109
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 110
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 110
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 111
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 111
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 112
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 112
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 113
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 113
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 114
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODONS

<400> 114
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 115
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODON

<400> 115
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240

ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 116
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODON

<400> 116
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 117
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODON

<400> 117
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 118
<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND STOP CODON

<400> 118
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 119

<211> 592
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START CODON

<400> 119
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaatcat cgtcctttcc ttggctgctc 420
gcctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgcc tg   592

<210> 120
<211> 593
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START CODON

<400> 120
aatcaacctc tggattacaa aaatttgtga aagattgact ggtattctta actatgttgc 60
tccttttacg ctatgtggat acgctgcttt aatgcctttg tatcatgcta ttgcttcccg 120
tatggctttc attttctcct ccttgtataa atcctggttg ctgtctcttt atgaggagtt 180
gtggcccgtt gtcaggcaac gtggcgtggt gtgcactgtg tttgctgacg caacccccac 240
tggttggggc attgccacca cctgtcagct cctttccggg actttcgctt tccccctccc 300
tattgccacg gcggaactca tcgccgcctg ccttgcccgc tgctggacag gggctcggct 360
gttgggcact gacaattccg tggtgttgtc ggggaaggtc tgctgagact cggggctgct 420
cgcctgtgtt gccacctgga ttctgcgcgg gacgtccttc tgctacgtcc cttcggccct 480
caatccagcg gaccttcctt cccgcggcct gctgccggct ctgcggcctc ttccgcgtct 540
tcgccttcgc cctcagacga gtcggatctc cctttgggcc gcctccccgc ctg   593

<210> 121
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA FLAP REGION

<400> 121
tacaaatggc agtattcatc cacaatttta aaagaaaagg ggggattggg gggtacagtg 60
caggggaaag aatagtagac ataatagcaa cagacataca aactaaagaa ttacaaaaac 120
aaattacaaa aattcaaaat tttcgggttt attacaggga cagcagagat ccagtttgg 179

<210> 122
<211> 136
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED DNA FLAP REGION

<400> 122
tacaaatggc agtattcatc cacaattttt tgggggggtac agtgcagggg aaagaatagt 60
agacataata gcaacagaca tacaaactaa agaattacaa cgggtttatt acagggacag 120
cagagatcca gtttgg   136

<210> 123
<211> 16
<212> DNA

<213> Artificial Sequence

<220>
<223> Central Polypurine Tract (cPPT)

<400> 123
aaaagaaaag ggggga 16

<210> 124
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Central Termination Sequence (CTS)

<400> 124
aaacaaatta caaaaattca aaatttt 27

<210> 125
<211> 589
<212> DNA
<213> Woodchuck Hepatitis Virus

<400> 125
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 126
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 126
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 127
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 127
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180

tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 128
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 128
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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<210> 129
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 129
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 130
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 130
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 131
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 131
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 132
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 132
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 133
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 133
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctt 420
agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 134
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 134
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 135
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 135
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 136
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODONS

<400> 136
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc atggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 137
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODON

<400> 137
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cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 138
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODON

<400> 138
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<210> 139
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODON

<400> 139
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 140
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH STOP CODON

<400> 140
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 141
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 141
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 142
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 142
atggctgctt agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 143
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 143
atggctgctt agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 144
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 144
atggctgctt agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 145
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 145
atggctgctc gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 146
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 146
atggctgctt agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 147
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 147
atggctgctt agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 148
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 148
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 149
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 150
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 150
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 151
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODONS

<400> 151
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 152
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODON

<400> 152
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 153
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODON

<400> 153
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 154
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODON

<400> 154
atggctgctc gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 155
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH STOP CODON

<400> 155
atggctgctc gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 156
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 156
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240

ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 157
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 157
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 158
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 158
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 159
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 159
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 160

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

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 160
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 161
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 161
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 162
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 162
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
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<210> 163
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 163

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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 164
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 164
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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<210> 165
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 165
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<210> 166
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 166
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 167
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 167
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

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gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 169
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 169
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atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 170
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH START AND STOP CODONS

<400> 170
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaagctga cgtcctttcc ggggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 171
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 171
ggggctgctt agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 172
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 172
ggggctgctt agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 173
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 173
ggggctgctt agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 174
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 174
ggggctgctt agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60

ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 175
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 175
ggggctgctc gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 176
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 176
ggggctgctt agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 177
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 177
ggggctgctt agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 178
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 178
ggggctgctt agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 179
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

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ggggctgctc gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 180
<211> 179
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<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 180
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ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 181
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 181
ggggctgctc gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 182
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 182
ggggctgctt agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 183
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 183
ggggctgctc gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 184
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP

CODONS

<400> 184
ggggctgctc gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 185
<211> 179
<212> DNA
<213> Artificial Sequence

<220>
<223> TRUNCATED X GENE WITH MODIFIED START AND STOP
CODONS

<400> 185
ggggctgctc gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc 60
ttcggccctc aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct 120
tccgcgtctt cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 179

<210> 186
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 186
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 187
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 187
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 188
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 188
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 189
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 189
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 190
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 190
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 191
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<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 191

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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 192
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 192
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atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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<210> 193
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 193
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
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<210> 194
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP
CODONS

<400> 194
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
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ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300

attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
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<210> 195
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 195
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ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
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<210> 196
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODONS

<400> 196
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aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 197
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 197
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ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 198
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 198
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 199
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 199
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 200
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 200
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc atggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 201
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND STOP CODON

<400> 201
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 202
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 202
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 203
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 203
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 204
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 204
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240

ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 205
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 205
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 206
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 206
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 207
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 207
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540

cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 208
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 208
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 209
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 209
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

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

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 210
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 211
<211> 589
<212> DNA

<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 211
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgtag ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

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

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 212
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctt 420
agctgtgttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

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

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 213
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgagttg ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 214
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 214
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgtag ccacctggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 215
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
STOP CODONS

<400> 215
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
tggcccgttg tcaggcaacg tggcgtggtg tgcactgtgt ttgctgacgc aacccccact 240
ggttggggca ttgccaccac ctgtcagctc ctttccggga ctttcgcttt ccccctccct 300
attgccacgg cggaactcat cgccgcctgc cttgcccgct gctggacagg ggctcggctg 360
ttgggcactg acaattccgt ggtgttgtcg gggaaggtct gctgagactc ggggctgctc 420
gcctgtgttg ctgactggat tctgcgcggg acgtccttct gctacgtccc ttcggccctc 480
aatccagcgg accttccttc ccgcggcctg ctgccggctc tgcggcctct tccgcgtctt 540
cgccttcgcc ctcagacgag tcggatctcc ctttgggccg cctccccgc 589

<210> 216
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> MODIFIED PRE WITH PROMOTER SEQUENCE AND START AND
CODON

<400> 216
aatcaacctc tggattacaa aatttgtgaa agattgactg gtattcttaa ctatgttgct 60
ccttttacgc tatgtggata cgctgcttta atgcctttgt atcatgctat tgcttcccgt 120
atggctttca ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180
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