SEQUENCE LISTING

<110> SANGAMO THERAPEUTICS, INC.

<120> ENGINEERED TARGET SPECIFIC NUCLEASES

<130> 8325-0169.40

<140>
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<150> 62/802,092
<151> 2019-02-06

<150> 62/795,937
<151> 2019-01-23

<150> 62/758,786
<151> 2018-11-12

<150> 62/728,226
<151> 2018-09-07

<150> 62/628,016
<151> 2018-02-08

<160> 72

<170> PatentIn version 3.5

<210> 1
<211> 50
<212> DNA
<213> Xenopus sp.

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<221> misc_feature
<222> (1)..(2)
<223> This region may or may not be present in its entirety

<400> 1
tgcttgttct ttttgcagaa gctcagaata aacgctcaac tttggcagat 50

<210> 2
<211> 579
<212> PRT
<213> Planomicrobium okeanokoites

<400> 2
Met Val Ser Lys Ile Arg Thr Phe Gly Trp Val Gln Asn Pro Gly Lys
1   5   10   15

Phe Glu Asn Leu Lys Arg Val Val Gln Val Phe Asp Arg Asn Ser Lys
            20   25   30

Val His Asn Glu Val Lys Asn Ile Lys Ile Pro Thr Leu Val Lys Glu
        35   40   45

Ser Lys Ile Gln Lys Glu Leu Val Ala Ile Met Asn Gln His Asp Leu
    50   55   60

Ile Tyr Thr Tyr Lys Glu Leu Val Gly Thr Gly Thr Ser Ile Arg Ser
65   70   75   80

Glu Ala Pro Cys Asp Ala Ile Ile Gln Ala Thr Ile Ala Asp Gln Gly
                85   90   95

Asn Lys Lys Gly Tyr Ile Asp Asn Trp Ser Ser Asp Gly Phe Leu Arg
            100   105   110

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

Phe Val Ile Thr Asp Val Gly Leu Ala Tyr Ser Lys Ser Ala Asp Gly
    130   135   140

Ser Ala Ile Glu Lys Glu Ile Leu Ile Glu Ala Ile Ser Ser Tyr Pro
145   150   155   160

Pro Ala Ile Arg Ile Leu Thr Leu Leu Glu Asp Gly Gln His Leu Thr
                165   170   175

Lys Phe Asp Leu Gly Lys Asn Leu Gly Phe Ser Gly Glu Ser Gly Phe
            180   185   190

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Thr Ser Leu Pro Glu Gly Ile Leu Leu Asp Thr Leu Ala Asn Ala Met
        195                 200                 205

Pro Lys Asp Lys Gly Glu Ile Arg Asn Asn Trp Glu Gly Ser Ser Asp
    210                 215                 220

Lys Tyr Ala Arg Met Ile Gly Gly Trp Leu Asp Lys Leu Gly Leu Val
225                 230                 235                 240

Lys Gln Gly Lys Lys Glu Phe Ile Ile Pro Thr Leu Gly Lys Pro Asp
                245                 250                 255

Asn Lys Glu Phe Ile Ser His Ala Phe Lys Ile Thr Gly Glu Gly Leu
            260                 265                 270

Lys Val Leu Arg Arg Ala Lys Gly Ser Thr Lys Phe Thr Arg Val Pro
        275                 280                 285

Lys Arg Val Tyr Trp Glu Met Leu Ala Thr Asn Leu Thr Asp Lys Glu
    290                 295                 300

Tyr Val Arg Thr Arg Arg Ala Leu Ile Leu Glu Ile Leu Ile Lys Ala
305                 310                 315                 320

Gly Ser Leu Lys Ile Glu Gln Ile Gln Asp Asn Leu Lys Lys Leu Gly
                325                 330                 335

Phe Asp Glu Val Ile Glu Thr Ile Glu Asn Asp Ile Lys Gly Leu Ile
            340                 345                 350

Asn Thr Gly Ile Phe Ile Glu Ile Lys Gly Arg Phe Tyr Gln Leu Lys
        355                 360                 365

Asp His Ile Leu Gln Phe Val Ile Pro Asn Arg Gly Val Thr Lys Gln
    370                 375                 380
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Leu Val Lys Ser Glu Leu Glu Glu Lys Lys Ser Glu Leu Arg His Lys
385                 390                 395                 400

Leu Lys Tyr Val Pro His Glu Tyr Ile Glu Leu Ile Glu Ile Ala Arg
                405                 410                 415

Asn Ser Thr Gln Asp Arg Ile Leu Glu Met Lys Val Met Glu Phe Phe
            420                 425                 430

Met Lys Val Tyr Gly Tyr Arg Gly Lys His Leu Gly Gly Ser Arg Lys
        435                 440                 445

Pro Asp Gly Ala Ile Tyr Thr Val Gly Ser Pro Ile Asp Tyr Gly Val
    450                 455                 460

Ile Val Asp Thr Lys Ala Tyr Ser Gly Gly Tyr Asn Leu Pro Ile Gly
465                 470                 475                 480

Gln Ala Asp Glu Met Gln Arg Tyr Val Glu Glu Asn Gln Thr Arg Asn
                485                 490                 495

Lys His Ile Asn Pro Asn Glu Trp Trp Lys Val Tyr Pro Ser Ser Val
            500                 505                 510

Thr Glu Phe Lys Phe Leu Phe Val Ser Gly His Phe Lys Gly Asn Tyr
        515                 520                 525

Lys Ala Gln Leu Thr Arg Leu Asn His Ile Thr Asn Cys Asn Gly Ala
    530                 535                 540

Val Leu Ser Val Glu Glu Leu Leu Ile Gly Gly Glu Met Ile Lys Ala
545                 550                 555                 560

Gly Thr Leu Thr Leu Glu Glu Val Arg Arg Lys Phe Asn Asn Gly Glu
                565                 570                 575

Ile Asn Phe
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<210> 3
<211> 7
<212> PRT
<213> Artificial Sequence

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<400> 3
Asp Tyr Lys Asp Asp Asp Lys
1 5

<210> 4
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
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Peptide

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<222> (1)..(1)
<223> May or may not be present

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Met Asp Tyr Lys Asp His Asp Gly Asp Tyr Lys Asp His Asp Ile Asp
1 5 10 15

Tyr Lys Asp Asp Asp Asp Lys
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<210> 5
<211> 7
<212> PRT
<213> Simian virus 40

<400> 5
Pro Lys Lys Lys Arg Lys Val
1 5

<210> 6
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
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<400> 6
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1   5

<210> 7
<211> 10
<212> PRT
<213> Hepatitis delta virus

<400> 7
Glu Gly Ala Pro Pro Ala Lys Arg Ala Arg
1   5   10

<210> 8
<211> 8
<212> PRT
<213> Unknown

<220>
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<400> 8
Val Ser Arg Lys Arg Pro Arg Pro
1   5

<210> 9
<211> 18
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
      nucleoplasmin carboxy tail NLS sequence

<400> 9
Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys Lys Lys
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Leu Asp

<210> 10
<211> 38
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown:
      NLS sequence

<400> 10
Asn Gln Ser Ser Asn Phe Gly Pro Met Lys Gly Gly Asn Phe Gly Gly
1   5   10   15

Arg Ser Ser Gly Pro Tyr Gly Gly Gly Gly Gln Tyr Phe Ala Lys Pro
            20   25   30

Arg Asn Gln Gly Gly Tyr
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<210> 11
<211> 17
<212> PRT
<213> Human T-cell leukemia virus type 1

<400> 11
Pro Lys Thr Arg Arg Arg Pro Arg Arg Ser Gln Arg Lys Arg Pro Pro
1   5   10   15

Thr

<210> 12
<211> 28
<212> DNA
<213> Artificial Sequence

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

<400> 12
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<210> 13
<211> 28
<212> DNA
<213> Artificial Sequence

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

<400> 13
cctatccatt gcactatgct ttatttaa 28

<210> 14
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 14
Gln Ser Gly Asn Leu Ser Arg
1 5

<210> 15
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 15
Leu Lys Gln Asn Leu Cys Met
1 5

<210> 16
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 16
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1 5

<210> 17
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 17
Thr Ser Gly Asn Leu Thr Arg
1 5

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

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

<400> 18
Arg Gln Ser His Leu Cys Leu
1 5

<210> 19
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 19
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1 5

<210> 20
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
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<400> 20
Trp Gln Ser Asn Leu Gln Asn
1 5

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

<220>
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peptide

<400> 21
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1 5

<210> 22
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 22
Leu Ile Thr Thr Leu Arg Asn
1 5

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

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

<400> 23
Trp Ala Ser Asn Leu Gln Asn
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<210> 24
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 24
Thr Pro Gln Leu Leu Asp Arg
1 5

<210> 25
<211> 7
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<220>
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<400> 25
Leu Lys His Asn Leu Leu Thr
1 5

<210> 26
<211> 7
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<220>

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<400> 26
Asp Gln Ser Asn Leu Asn Ala
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<210> 27
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<400> 27
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<210> 28
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<212> PRT
<213> Artificial Sequence

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

<400> 28
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<210> 29
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 29
His Arg Ser Asn Leu Asn Lys
1 5

<210> 30
<211> 7
<212> PRT
<213> Artificial Sequence

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

<400> 30
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<210> 31
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 31
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1 5

<210> 32
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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peptide

<400> 32
Leu Arg His Asp Leu Glu Arg
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<210> 33
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 33
Leu Lys Trp Asn Leu Arg Thr
1 5

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

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

<220>
<221> modified_base
<222> (21)..(24)
<223> a, c, t, g, unknown or other

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<210> 35
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
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<222> (21)..(24)
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<210> 36
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<222> (21)..(24)
<223> a, c, t, g, unknown or other

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<210> 38
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
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<400> 38
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<210> 39

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

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

<400> 39
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<210> 40
<211> 20
<212> DNA
<213> Artificial Sequence

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

<400> 40
aaacccaggc caactcaact 20

<210> 41
<211> 51
<212> DNA
<213> Homo sapiens

<400> 41
attgaattca tarctatccc aaagacctat ccattgcact atgctttatt t 51

<210> 42
<211> 592
<212> DNA
<213> Artificial Sequence

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

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cctttacgc tgtgtggata tgctgcttta atgcctctgt atcatgctat tgcttcccgt 120

acggctttcg ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180

tggcccgttg tccgtcaacg tggcgtggtg tgctctgtgt ttgctgacgc aacccccact 240

ggctggggca ttgccaccac ctgtcaactc ctttctggga ctttcgcttt ccccctcccg 300

atcgccacgg cagaactcat cgccgcctgc cttgcccgct gctggacagg ggctaggttg 360

ctgggcactg ataattccgt ggtgttgtcg gggaaatcat cgtcctttcc ttggctgctc 420

gcctgtgttg ccaactggat cctgcgcggg acgtccttct gctacgtccc ttcggctctc 480

aatccagcgg acctcccttc ccgaggcctt ctgccggttc tgcggcctct cccgcgtctt 540

cgctttcggc ctccgacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 43
<211> 3195
<212> DNA
<213> Artificial Sequence

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

<400> 43
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ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct gcggcctaag cttgagctct tcgaaaggct cagaggcaca caggagtttc 180

tgggctcacc ctgccccctt ccaacccctc agttcccatc ctccagcagc tgtttgtgtg 240

ctgcctctga agtccacact gaacaaactt cagcctactc atgtccctaa aatgggcaaa 300

cattgcaagc agcaaacagc aaacacacag ccctccctgc ctgctgacct tggagctggg 360

gcagaggtca gagacctctc tgggcccatg ccacctccaa catccactcg acccccttgga 420

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ggacgctgtg gtttctgagc caggtacaat gactcctttc ggtaagtgca gtggaagctg 660

tacactgccc aggcaaagcg tccgggcagc gtaggcgggc gactcagatc ccagccagtg 720

gacttagccc ctgtttgctc ctccgataac tggggtgacc ttggttaata ttcaccagca 780

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agaagccctt ccagtgtcga atctgcatgc agaagtttgc ctggcagtcc aacctgcaga 1440

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gccccatcga ttacggcgtg atcgtggaca caaaggccta cagcggcggc tacaatctgc 1920

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tggggcagga cagcaagggg gaggattggg aagacaatag caggcatgct ggggatgcgg 3060

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cgagcgagcg cgcag 3195

<210> 44
<211> 130
<212> DNA
<213> Artificial Sequence

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

<400> 44
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ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct 130

<210> 45
<211> 321
<212> DNA
<213> Artificial Sequence

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

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ccatcctcca gcagctgttt gtgtgctgcc tctgaagtcc acactgaaca aacttcagcc 120

tactcatgtc cctaaaatgg gcaaacattg caagcagcaa acagcaaaca cacagccctc 180

cctgcctgct gaccttggag ctggggcaga ggtcagagac ctctctgggc ccatgccacc 240

tccaacatcc actcgacccc ttggaatttc ggtggagagg agcagaggtt gtcctggcgt 300

ggtttaggta gtgtgagagg g 321

<210> 46
<211> 393
<212> DNA
<213> Artificial Sequence

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

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agtggtactc tcccagagac tgtctgactc acgccacccc ctccaccttg gacacaggac 120

gctgtggttt ctgagccagg tacaatgact cctttcggta agtgcagtgg aagctgtaca 180

ctgcccaggc aaagcgtccg ggcagcgtag gcgggcgact cagatcccag ccagtggact 240

tagcccctgt ttgctcctcc gataactggg gtgaccttgg ttaatattca ccagcagcct 300

ccccgttgc ccctctggat ccactgctta aatacggacg aggacagggc cctgtctcct 360

cagcttcagg caccaccact gacctgggac agt 393

<210> 47
<211> 48
<212> DNA
<213> Artificial Sequence

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

<400> 47
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<210> 48
<211> 133
<212> DNA
<213> Artificial Sequence

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

<400> 48
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cagagaagac tcttgcgttt ctgataggca cctattggtc ttactgacat ccactttgcc 120

tttctctcca cag 133

<210> 49
<211> 66
<212> DNA
<213> Artificial Sequence

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

<400> 49
gactacaaag accatgacgg tgattataaa gatcatgaca tcgattacaa ggatgacgat 60

gacaag 66

<210> 50
<211> 21
<212> DNA
<213> Artificial Sequence

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

<400> 50
cccaagaaga agaggaaggt c 21

<210> 51
<211> 432
<212> DNA
<213> Artificial Sequence

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

<400> 51
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ggcaacctgg cccgccacat ccgcacccac accggcgaga agccttttgc ctgtgacatt 120

tgtgggagga aatttgccct gaagcagaac ctgtgtatgc ataccaagat acacacgggc 180

gagaagccct tccagtgtcg aatctgcatg cagaagtttg cctggcagtc caacctgcag 240

aaccatacca agatacacac gggcgagaag cccttccagt gtcgaatctg catgcgtaac 300

ttcagtacct ccggcaacct gacccgccac atccgcaccc acaccggcga gaagcctttt 360

gcctgtgaca tttgtgggag gaaatttgcc cgccgctccc acctgacctc ccataccaag 420

atacacctgc gg 432

<210> 52
<211> 600
<212> DNA
<213> Artificial Sequence

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

<400> 52
cagctggtga agagcgagct ggaggagaag aagtccgagc tgcggcacaa gctgaagtac 60

gtgccccacg agtacatcga gctgatcgag atcgccagga acagcaccca ggaccgcatc 120

ctggagatga aggtgatgga gttcttcatg aaggtgtacg gctacagggg aaagcacctg 180

ggcggaagca gaaagcctga cggcgccatc tatacagtgg gcagccccat cgattacggc 240

gtgatcgtgg acacaaaggc ctacagcggc ggctacaatc tgcctatcgg ccaggccgac 300

gagatggaga gatacgtgga ggagaaccag acccgggata agcacctcaa ccccaacgag 360

tggtggaagg tgtaccctag cagcgtgacc gagttcaagt tcctgttcgt gagcggccac 420

ttcaagggca actacaaggc ccagctgacc aggctgaacc acatcaccaa ctgcgacggc 480

gccgtgctga gcgtggagga gctgctgatc ggcggcgaga tgatcaaagc cggcaccctg 540

acactggagg aggtgcggcg caagttcaac aacggcgaga tcaacttcag atcttgataa 600

<210> 53
<211> 592
<212> DNA
<213> Artificial Sequence

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

<400> 53
aatcaacctc tggattacaa aatttgtgaa agattgactg atattcttaa ctatgttgct 60

ccttttacgc tgtgtggata tgctgcttta atgcctctgt atcatgctat tgcttcccgt 120

acggctttcg ttttctcctc cttgtataaa tcctggttgc tgtctcttta tgaggagttg 180

tggcccgttg tccgtcaacg tggcgtggtg tgctctgtgt ttgctgacgc aacccccact 240

ggctggggca ttgccaccac ctgtcaactc tttctggga ctttcgcttt ccccctcccg 300

atcgccacgg cagaactcat cgccgcctgc cttgcccgct gctggacagg ggctaggttg 360

ctgggcactg ataattccgt ggtgttgtcg gggaaatcat cgtcctttcc ttggctgctc 420

gcctgtgttg ccaactggat cctgcgcggg acgtccttct gctacgtccc ttcggctctc 480

aatccagcgg acctcccttc ccgaggcctt ctgccggttc tgcggcctct cccgcgtctt 540

cgctttcggc ctccgacgag tcggatctcc ctttgggccg cctccccgcc tg 592

<210> 54
<211> 223
<212> DNA
<213> Artificial Sequence

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

<400> 54
ctgtgccttc tagttgccag ccatctgttg tttgcccctc ccccgtgcct tccttgaccc 60

tggaaggtgc cactcccact gtcctttcct aataaaatga ggaaattgca tcgcattgtc 120

tgagtaggtg tcattctatt ctgggggggtg gggtggggca ggacagcaag ggggaggatt 180

gggaagacaa tagcaggcat gctggggatg cggtgggctc tat 223

<210> 55
<211> 108
<212> DNA
<213> Artificial Sequence

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

<400> 55
aggaacccct agtgatggag ttggccactc cctctctgcg cgctcgctcg ctcactgagg 60

ccgcccgggc tttgcccggg cggcctcagt gagcgagcga gcgcgcag 108

<210> 56
<211> 3273
<212> DNA
<213> Artificial Sequence

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

<400> 56
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct gcggcctaag cttgagctct tcgaaaggct cagaggcaca caggagtttc 180

tgggctcacc ctgccccctt ccaacccctc agttcccatc ctccagcagc tgtttgtgtg 240

ctgcctctga agtccacact gaacaaactt cagcctactc atgtccctaa aatgggcaaa 300

cattgcaagc agcaaacagc aaacacacag ccctccctgc ctgctgacct tggagctggg 360

gcagaggtca gagacctctc tgggcccatg ccacctccaa catccactcg acccccttgga 420

atttcggtgg agaggagcag aggttgtcct ggcgtggttt aggtagtgtg agaggggtcc 480

cggggatctt gctaccagtg gaacagccac taaggattct gcagtgagag cagagggcca 540

gctaagtggt actctcccag agactgtctg actcacgcca ccccctccac cttggacaca 600

ggacgctgtg gtttctgagc caggtacaat gactcctttc ggtaagtgca gtggaagctg 660

tacactgccc aggcaaagcg tccgggcagc gtaggcgggc gactcagatc ccagccagtg 720

gacttagccc ctgtttgctc ctccgataac tggggtgacc ttggttaata ttcaccagca 780

gcctcccccg ttgcccctct ggatccactg cttaaatacg gacgaggaca gggccctgtc 840

tcctcagctt caggcaccac cactgacctg ggacagtcct aggtgcttgt tctttttgca 900

gaagctcaga ataaacgctc aactttggca gatactagtc aggtaagtat caaggttaca 960

agacaggttt aaggagacca atagaaactg ggcttgtcga gacagagaag actcttgcgt 1020

ttctgatagg cacctattgg tcttactgac atccactttg cctttctctc cacaggaccg 1080

gtgccatgga ctacaaagac catgacggtg attataaaga tcatgacatc gattacaagg 1140

atgacgatga caagatggcc cccaagaaga agaggaaggt cggcattcat ggggtacccg 1200

ccgctatggc tgagaggccc ttccagtgtc gaatctgcat gcgtaacttc agtcagtcct 1260

ccgacctgtc ccgccacatc cgcacccaca ccggcgagaa gccttttgcc tgtgacattt 1320

gtgggaggaa atttgccctg aagcacaacc tgctgaccca taccaagata cacacgggcg 1380

agaagccctt ccagtgtcga atctgcatgc agaacttcag tgaccagtcc aacctgcgcg 1440

cccacatccg cacccacacc ggcgagaagc cttttgcctg tgacatttgt gggaggaaat 1500

ttgcccgcaa cttctccctg accatgcata ccaagataca caccggagag cgcggcttcc 1560

agtgtcgaat ctgcatgcgt aacttcagtc tgcgccacga cctggagcgc cacatccgca 1620

cccacaccgg cgagaagcct tttgcctgtg acatttgtgg gaggaaattt gcccaccgct 1680

ccaacctgaa caagcatacc aagatacacc tgcggggatc ccagctggtg aagagcgagc 1740

tggaggagaa gaagtccgag ctgcggcaca agctgaagta cgtgccccac gagtacatcg 1800

agctgatcga gatcgccagg aacagcaccc aggaccgcat cctggagatg aaggtgatgg 1860

agttcttcat gaaggtgtac ggctacaggg gaaagcacct gggcggaagc agaaagcctg 1920

acggcgccat ctatacagtg ggcagcccca tcgattacgg cgtgatcgtg gacacaaagg 1980

cctacagcgg cggctacaat ctgagcatcg gccaggccga cgagatgcag agatacgtga 2040

aggagaacca gacccggaat aagcacatca accccaacga gtggtggaag gtgtacccta 2100

gcagcgtgac cgagttcaag ttcctgttcg tgagcggcca cttcaagggc aactacaagg 2160

cccagctgac caggctgaac cgcaaaacca actgcaatgg cgccgtgctg agcgtggagg 2220

agctgctgat cggcggcgag atgatcaaag ccggcaccct gacactggag gaggtgcggc 2280

gcaagttcaa caacggcgag atcaacttct gataactcga gtctagaaat caacctctgg 2340

attacaaaat ttgtgaaaga ttgactgata ttcttaacta tgttgctcct tttacgctgt 2400

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tctcctcctt gtataaatcc tggttgctgt ctctttatga ggagttgtgg cccgttgtcc 2520

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ccaccacctg tcaactcctt tctgggactt tcgctttccc cctcccgatc gccacggcag 2640

aactcatcgc cgcctgcctt gcccgctgct ggacaggggc taggttgctg ggcactgata 2700

attccgtggt gttgtcgggg aaatcatcgt cctttccttg gctgctcgcc tgtgttgcca 2760

actggatcct gcgcgggacg tccttctgct acgtcccttc ggctctcaat ccagcggacc 2820

tcccttcccg aggccttctg ccggttctgc ggcctctccc gcgtcttcgc tttcggcctc 2880

cgacgagtcg gatctccctt tgggccgcct ccccgcctgg ctagcctgtg ccttctagtt 2940

gccagccatc tgttgtttgc ccctcccccg tgccttcctt gaccctggaa ggtgccactc 3000

ccactgtcct ttcctaataa aatgaggaaa ttgcatcgca ttgtctgagt aggtgtcatt 3060

ctattctggg gggtggggtg gggcaggaca gcaaggggga ggattgggaa gacaatagca 3120

ggcatgctgg ggatgcggtg ggctctatgc ggccgcgtcg agcgcaggaa cccctagtga 3180

tggagttggc cactccctct ctgcgcgctc gctcgctcac tgaggccgcc cgggctttgc 3240

ccgggcggcc tcagtgagcg agcgagcgcg cag 3273

<210> 57
<211> 516
<212> DNA
<213> Artificial Sequence

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

<400> 57
gccgctatgg ctgagaggcc cttccagtgt cgaatctgca tgcgtaactt cagtcagtcc 60

tccgacctgt cccgccacat ccgcacccac accggcgaga agccttttgc ctgtgacatt 120

tgtgggagga aatttgccct gaagcacaac ctgctgaccc ataccaagat acacacgggc 180

gagaagccct tccagtgtcg aatctgcatg cagaacttca gtgaccagtc caacctgcgc 240

gcccacatcc gcacccacac cggcgagaag ccttttgcct gtgacatttg tgggaggaaa 300

tttgcccgca acttctccct gaccatgcat accaagatac acaccggaga gcgcggcttc 360

cagtgtcgaa tctgcatgcg taacttcagt ctgcgccacg acctggagcg ccacatccgc 420

acccacaccg gcgagaagcc ttttgcctgt gacatttgtg ggaggaaatt tgcccaccgc 480

tccaacctga acaagcatac caagatacac ctgcgg 516

<210> 58
<211> 594
<212> DNA
<213> Artificial Sequence

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

<400> 58
cagctggtga agagcgagct ggaggagaag aagtccgagc tgcggcacaa gctgaagtac 60

gtgccccacg agtacatcga gctgatcgag atcgccagga acagcaccca ggaccgcatc 120

ctggagatga aggtgatgga gttcttcatg aaggtgtacg gctacagggg aaagcacctg 180

ggcggaagca gaaagcctga cggcgccatc tatacagtgg gcagccccat cgattacggc 240

gtgatcgtgg acacaaaggc ctacagcggc ggctacaatc tgagcatcgg ccaggccgac 300

gagatgcaga gatacgtgaa ggagaaccag acccggaata agcacatcaa ccccaacgag 360

tggtggaagg tgtaccctag cagcgtgacc gagttcaagt tcctgttcgt gagcggccac 420

ttcaagggca actacaaggc ccagctgacc aggctgaacc gcaaaaccaa ctgcaatggc 480

gccgtgctga gcgtggagga gctgctgatc ggcggcgaga tgatcaaagc cggcaccctg 540

acactggagg aggtgcggcg caagttcaac aacggcgaga tcaacttctg ataa 594

<210> 59
<211> 2474
<212> DNA
<213> Artificial Sequence

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

<400> 59
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct gcggcctaag cttgagcgga gttccaattg tactgtacag aaccatggtc 180

acatgtttaa cgctagcgtg ccgacctggt aaactgatca gtgggtgcac ttaggactgc 240

gtcttacgct aatcacatgc gtgcggccgc tttattctat tttcccagta aaataaagtt 300

ttagtaaact ctgcatcttt aaagaattat tttggcattt atttctaaaa tggcatagta 360

ttttgtattt gtgaagtctt acaaggttat cttattaata aaattcaaac atcctaggta 420

aaaaaaaaaa aaggtcagaa ttgtttagtg actgtaattt tcttttgcgc actaaggaaa 480

gtgcaaagta acttagagtg actgaaactt cacagaatag ggttgaagat tgaattcata 540

actatcccaa ggtaccacta aagaattatt cttttacatt tcagtttttc ttgatcatga 600

aaacgccaac aaaatcctga accggcccaa gcggtacaac tcaggcaagc tggaagagtt 660

cgtgcagggc aacctggaac gggagtgcat ggaagagaag tgcagcttcg aggaagcccg 720

ggaggtgttc gagaacaccg agcggaccac cgagttctgg aagcagtacg tggacggcga 780

ccagtgcgag tcaaacccct gcctgaacgg cggcagctgc aaggacgata tcaacagcta 840

cgagtgctgg tgccccttcg gcttcgaggg caagaactgc gagctggacg tgacctgcaa 900

catcaagaac ggccgctgcg agcagttctg caagaacagc gccgacaaca aggtggtgtg 960

ctcatgcact gagggctacc ggctggccga gaaccagaag agctgcgagc ccgccgtgcc 1020

cttcccctgc ggcagagtgt ccgtgagcca gaccagcaag ctgaccaggg ccgaggccgt 1080

gttccctgac gtggactacg tgaactcaac cgaggccgag acaatcctgg acaacatcac 1140

ccagagcacc cagtccttca acgacttcac ccgggtggtg ggcggcgagg acgccaagcc 1200

cggccagttc ccttggcagg tggtgctgaa cggcaaggtg gacgccttct gcggcggctc 1260

aatcgtgaac gagaagtgga tcgtgacagc cgcccactgc gtggagacag gcgtgaagat 1320

caccgtggtg gccggcgaac acaatatcga ggaaaccgag cacaccgagc agaaacggaa 1380

cgtgatccgg attatccccc accacaacta caacgccgcc atcaacaagt acaaccacga 1440

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tatcgccgac aaagagtaca ccaacatctt tctgaagttc ggcagcggct acgtgtccgg 1560

ctggggcagg gtgttccaca agggccgcag cgccctggtg ctgcagtacc tgcgggtgcc 1620

cctggtggac agagccacct gcctgcggtc aaccaagttc accatctaca acaacatgtt 1680

ctgcgccggc ttccacgagg gcggcaggga cagctgccag ggcgacagcg gcggacccca 1740

cgtgaccgag gtggagggca ccagctttct gaccggcatc atctcatggg gcgaggaatg 1800

cgccatgaag ggcaagtacg gaatctacac taaggtgtca agatacgtga actggatcaa 1860

agagaaaacc aagctgacct gagtttaaac tgtgccttct agttgccagc catctgttgt 1920

ttgcccctcc cccgtgcctt ccttgaccct ggaaggtgcc actcccactg tcctttccta 1980

ataaaatgag gaaattgcat cgcattgtct gagtaggtgt cattctattc tgggggggtgg 2040

ggtggggcag gacagcaagg gggaggattg ggaagacaat agcaggcatg ctggggatgc 2100

ggtgggctct atggaccggt ctatccattg cactatgctt tatttaaaaa ccacaaaacc 2160

tgtgctgttg atctcataaa tagaacttgt atttatattt attttcattt tagtctgtct 2220

ggatccacaa attaatcgaa cctgcagctg atatcgacgc ttaagtaggg cttagcaaac 2280

gcgtctccaa cgtttcgccg ttaacacccc acatagtgag tggtcttagt agtccgggtg 2340

tttaaactga aagataactc gagcgcagga acccctagtg atggagttgg ccactccctc 2400

tctgcgcgct cgctcgctca ctgaggccgc ccgggctttg cccgggcggc ctcagtgagc 2460

gagcgagcgc gcag 2474

<210> 60
<211> 280
<212> DNA
<213> Artificial Sequence

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

<400> 60
tttattctat tttcccagta aaataaagtt ttagtaaact ctgcatcttt aaagaattat 60

tttggcattt atttctaaaa tggcatagta ttttgtattt gtgaagtctt acaaggttat 120

cttattaata aaattcaaac atcctaggta aaaaaaaaaa aaggtcagaa ttgtttagtg 180

actgtaattt tcttttgcgc actaaggaaa gtgcaaagta acttagagtg actgaaactt 240

cacagaatag ggttgaagat tgaattcata actatcccaa 280

<210> 61
<211> 28
<212> DNA
<213> Artificial Sequence

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

<400> 61
actaaagaat tattctttta catttcag 28

<210> 62
<211> 1298
<212> DNA
<213> Artificial Sequence

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

<400> 62
tttttcttga tcatgaaaac gccaacaaaa tcctgaaccg gcccaagcgg tacaactcag 60

gcaagctgga agagttcgtg cagggcaacc tggaacggga gtgcatggaa gagaagtgca 120

gcttcgagga agcccgggag gtgttcgaga acaccgagcg gaccaccgag ttctggaagc 180

agtacgtgga cggcgaccag tgcgagtcaa acccctgcct gaacggcggc agctgcaagg 240

acgatatcaa cagctacgag tgctggtgcc ccttcggctt cgagggcaag aactgcgagc 300

tggacgtgac ctgcaacatc aagaacggcc gctgcgagca gttctgcaag aacagcgccg 360

acaacaaggt ggtgtgctca tgcactgagg gctaccggct ggccgagaac cagaagagct 420

gcgagcccgc cgtgcccttc ccctgcggca gagtgtccgt gagccagacc agcaagctga 480

ccagggccga ggccgtgttc cctgacgtgg actacgtgaa ctcaaccgag gccgagacaa 540

tcctggacaa catcacccag agcacccagt ccttcaacga cttcacccgg gtggtgggcg 600

gcgaggacgc caagcccggc cagttccctt ggcaggtggt gctgaacggc aaggtggacg 660

ccttctgcgg cggctcaatc gtgaacgaga agtggatcgt gacagccgcc cactgcgtgg 720

agacaggcgt gaagatcacc gtggtggccg gcgaacacaa tatcgaggaa accgagcaca 780

ccgagcagaa acggaacgtg atccggatta tcccccacca caactacaac gccgccatca 840

acaagtacaa ccacgatatc gccctgctgg aactggacga gcctctggtg ctgaattcat 900

acgtgacccc catctgtatc gccgacaaag agtacaccaa catctttctg aagttcggca 960

gcggctacgt gtccggctgg ggcagggtgt tccacaaggg ccgcagcgcc ctggtgctgc 1020

agtacctgcg ggtgcccctg gtggacagag ccacctgcct gcggtcaacc aagttcacca 1080

tctacaacaa catgttctgc gccggcttcc acgagggcgg cagggacagc tgccagggcg 1140

acagcggcgg accccacgtg accgaggtgg agggcaccag ctttctgacc ggcatcatct 1200

catggggcga ggaatgcgcc atgaagggca agtacggaat ctacactaag gtgtcaagat 1260

acgtgaactg gatcaaagag aaaaccaagc tgacctga 1298

<210> 63
<211> 225
<212> DNA
<213> Artificial Sequence

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

<400> 63
ctgtgccttc tagttgccag ccatctgttg tttgcccctc ccccgtgcct tccttgaccc 60

tggaaggtgc cactcccact gtcctttcct aataaaatga ggaaattgca tcgcattgtc 120

tgagtaggtg tcattctatt ctgggggggtg gggtggggca ggacagcaag ggggaggatt 180

gggaagacaa tagcaggcat gctggggatg cggtgggctc tatgg 225

<210> 64
<211> 100
<212> DNA
<213> Artificial Sequence

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

<400> 64
ctatccattg cactatgctt tatttaaaaa ccacaaaacc tgtgctgttg atctcataaa 60

tagaacttgt atttatattt attttcattt tagtctgtct 100

<210> 65
<211> 2758
<212> DNA
<213> Artificial Sequence

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

<400> 65
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct gcggcctaag cttgagcgga gttccaattg tactgtacag aaccatggtc 180

acatgtttaa cgctagcgtg ccgacctggt aaactgatca gtgggtgcac ttaggactgc 240

gtcttacgct aatcacatgc gtgcggccgc tttattctat tttcccagta aaataaagtt 300

ttagtaaact ctgcatcttt aaagaattat tttggcattt atttctaaaa tggcatagta 360

ttttgtattt gtgaagtctt acaaggttat cttattaata aaattcaaac atcctaggta 420

aaaaaaaaaa aaggtcagaa ttgtttagtg actgtaattt tcttttgcgc actaaggaaa 480

gtgcaaagta acttagagtg actgaaactt cacagaatag ggttgaagat tgaattcata 540

actatcccaa ggtaccacta aagaattatt cttttacatt tcagttagcg aaacccaggc 600

caactcaact acagatgcgc ttaacgtcct gctcatcatc gtggacgatt tgcggccgtc 660

gcttggctgc tatggagata agctcgtccg ctcgccgaac atcgatcagt tggcctcaca 720

ctcactgctt ttccaaaatg cgtttgcgca gcaggctgtc tgtgcacctt caagagtctc 780

attcttgacc gggcgacgcc ctgacacaac gcggctgtac gacttcaaca gctactggag 840

agtccacgcg ggtaactttt caactatccc acagtacttt aaagagaacg gatacgtgac 900

aatgagcgtg ggaaaggtct ttcaccccgg catctcctcg aatcacaccg acgattcgcc 960

ctactcgtgg tcgtttcctc cctaccatcc ttcgagcgag aagtatgaga acacgaaaac 1020

ttgtcgcgga cccgacggag agctgcacgc taatctgctg tgtccggtgg atgtcttgga 1080

cgtgcccgag ggaacgctcc ccgacaagca gtcaacggag caggcgattc agttgctgga 1140

gaagatgaaa acaagcgcgt cgcctttctt cctcgccgtg gggtatcaca agccccatat 1200

tcctttccgc tacccgaagg agttccagaa actttatcct ttggaaaaca tcactttggc 1260

accggacccg gaagtccccg acggtctgcc acccgtggcc tacaatccct ggatggatat 1320

caggcagagg gaagatgtgc aggcactcaa catctcagtc ccctacgggc ctattccagt 1380

cgattttcaa cgcaagattc ggcagtcgta ttttgcgtcg gtgtcctacc tcgatacgca 1440

agtaggtcga cttctgagcg cgcttgatga ccttcagctg gcaaattcca caatcatcgc 1500

ctttacgtcg gaccatgggt gggcgttggg agagcatgga gagtgggcaa agtatagcaa 1560

ttttgatgta gcaacgcacg tgcccctgat tttctacgtg ccgggtagaa cggcctcgct 1620

tcccgaggca ggcgaaaaac tttttcccta tctcgatcca ttcgactcgg cgagccagct 1680

tatggaaccg ggcagacaat ccatggactt ggtagaattg gtgtcccttt ttccgaccct 1740

cgccgggttg gcgggcttgc aagtaccccc tagatgccct gtaccgagct tccatgtgga 1800

actctgccgc gaagggaaaa acctcctcaa acactttcgg ttcagggacc ttgaggagga 1860

cccctatctg ccagggaatc cgcgagagtt gattgcctat tcccagtatc cgcgacccag 1920

cgatattcct caatggaact ccgataagcc ctccctcaaa gacatcaaga ttatggggta 1980

ctcgatcagg accatcgact atcgctacac agtgtgggta gggttcaatc ctgacgaatt 2040

cctcgcgaac ttttcggaca tccacgctgg tgagctgtat ttcgtagact cggacccgtt 2100

gcaagatcac aatatgtata atgattccca aggaggagat ttgttccagc tgctcatgcc 2160

gtgataaaga tctctgtgcc ttctagttgc cagccatctg ttgtttgccc ctccccgtg 2220

ccttccttga ccctggaagg tgccactccc actgtccttt cctaataaaa tgaggaaatt 2280

gcatcgcatt gtctgagtag gtgtcattct attctggggg gtggggtggg gcaggacagc 2340

aaggggagg attgggaaga caatagcagg catgctgggg atgcggtggg ctctatggac 2400

cggtctatcc attgcactat gctttattta aaaaccacaa aacctgtgct gttgatctca 2460

taaatagaac ttgtatttat atttattttc attttagtct gtctggatcc acaaattaat 2520

cgaacctgca gctgatatcg acgcttaagt agggcttagc aaacgcgtct ccaacgtttc 2580

gccgttaaca ccccacatag tgagtggtct tagtagtccg ggtgtttaaa ctgaaagata 2640

actcgagcgc aggaacccct agtgatggag ttggccactc cctctctgcg cgctcgctcg 2700

ctcactgagg ccgcccgggc tttgcccggg cggcctcagt gagcgagcga gcgcgcag 2758

<210> 66
<211> 1575
<212> DNA
<213> Artificial Sequence

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

<400> 66
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gatttgcggc cgtcgcttgg ctgctatgga gataagctcg tccgctcgcc gaacatcgat 120

cagttggcct cacactcact gcttttccaa aatgcgtttg cgcagcaggc tgtctgtgca 180

ccttcaagag tctcattctt gaccgggcga cgccctgaca caacgcggct gtacgacttc 240

aacagctact ggagagtcca cgcgggtaac ttttcaacta tcccacagta ctttaaagag 300

aacggatacg tgacaatgag cgtgggaaag gtctttcacc ccggcatctc ctcgaatcac 360

accgacgatt cgccctactc gtggtcgttt cctccctacc atccttcgag cgagaagtat 420

gagaacacga aaacttgtcg cggacccgac ggagagctgc acgctaatct gctgtgtccg 480

gtggatgtct tggacgtgcc cgagggaacg ctccccgaca agcagtcaac ggagcaggcg 540

attcagttgc tggagaagat gaaaacaagc gcgtcgcctt tcttcctcgc cgtggggtat 600

cacaagcccc atattccttt ccgctacccg aaggagttcc agaaacttta tcctttggaa 660

aacatcactt tggcaccgga cccggaagtc cccgacggtc tgccacccgt ggcctacaat 720

ccctggatgg atatcaggca gagggaagat gtgcaggcac tcaacatctc agtcccctac 780

gggcctattc cagtcgattt tcaacgcaag attcggcagt cgtattttgc gtcggtgtcc 840

tacctcgata cgcaagtagg tcgacttctg agcgcgcttg atgaccttca gctggcaaat 900

tccacaatca tcgcctttac gtcggaccat gggtgggcgt tgggagagca tggagagtgg 960

gcaaagtata gcaattttga tgtagcaacg cacgtgcccc tgattttcta cgtgccgggt 1020

agaacggcct cgcttcccga ggcaggcgaa aaacttttc cctatctcga tccattcgac 1080

tcggcgagcc agcttatgga accgggcaga caatccatgg acttggtaga attggtgtcc 1140

cttttttccga ccctcgccgg gttggcgggc ttgcaagtac cccctagatg ccctgtaccg 1200

agcttccatg tggaactctg ccgcgaaggg aaaaacctcc tcaaacactt tcggttcagg 1260

gaccttgagg aggaccccta tctgccaggg aatccgcgag agttgattgc ctattcccag 1320

tatccgcgac ccagcgatat tcctcaatgg aactccgata agccctccct caaagacatc 1380

aagattatgg ggtactcgat caggaccatc gactatcgct acacagtgtg ggtagggttc 1440

aatcctgacg aattcctcgc gaacttttcg gacatccacg ctggtgagct gtatttcgta 1500

gactcggacc cgttgcaaga tcacaatatg tataatgatt cccaaggagg agatttgttc 1560

cagctgctca tgccg 1575

<210> 67
<211> 1872
<212> DNA
<213> Artificial Sequence

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

<400> 67
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caacagctta acctcgccta tgtcggagca gtgcctcacc gcgggatcaa gcaagtaagg 180

acacattggc tccttgaact cgtcaccacg agaggatcga cgggaagggg gctttcgtac 240

aacttcactc atctcgatgg ctatttggat ctcctccgcg agaatcagtt gttgccaggc 300

ttcgaattga tgggatcggc gagcgggcac tttacagact tcgaggacaa gcagcaagtg 360

tttgagtgga aggacctcgt gtcgtcgctc gcgaggagat acattggtcg ctacggtttg 420

gcgcatgtgt caaagtggaa cttcgaaacg tggaacgagc ccgatcatca cgattttgac 480

aacgtgtcaa tgaccatgca gggtttcctt aactattacg acgcctgttc cgagggattg 540

agggcagcat caccggcgct tcggctggga gggcctggtg atagctttca tacaccacct 600

cgatcgccac tttcgtgggg gctgctgcgc cattgtcacg atggtacgaa cttcttcacc 660

ggggaagcgg gggtacggct tgattacatc agcctccacc gaaagggagc gcggtcaagc 720

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ttcgcagaca cacctatcta caatgatgag gcagacccac ttgtgggatg gtcccttccg 840

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cagaatctgc ttcttgcgaa tacgaccagc gcgtttcctt acgcgctttt gtcgaacgat 960

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gacgaacacg tggggtccaa atgcttgtgg acgtatgaaa ttcagttttc ccaagacggg 1680

aaagcgtaca ctccggtgtc gcgcaaaccc tccacgttca acctcttcgt cttttcccca 1740

gacacgggag ccgtatcagg gtcgtaccga gtcagagccc tcgattattg ggcgaggcct 1800

gggccgttct cggaccctgt accatacttg gaagtgccgg tgcccagggg accgccctcg 1860

cctggtaatc ct 1872

<210> 68
<211> 247
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
polynucleotide

<400> 68
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gctcctttta cgctatgtgg atacgctgct ttaatgcctt tgtatcatgc tattgcttcc 120

cgtatggctt tcattttctc ctccttgtat aaatcctggt tagttcttgc cacggcggaa 180

ctcatcgccg cctgccttgc ccgctgctgg acaggggctc ggctgttggg cactgacaat 240

tccgtgg 247

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

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

<400> 69
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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 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> 70
<211> 9
<212> PRT

<213> Unknown

<220>
<223> Description of Unknown:
"LAGLIDADG" family motif peptide

<400> 70
Leu Ala Gly Leu Ile Asp Ala Asp Gly
1 5

<210> 71
<211> 22
<212> PRT
<213> Artificial Sequence

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

<400> 71
Asp Tyr Lys Asp His Asp Gly Asp Tyr Lys Asp His Asp Ile Asp Tyr
1 5 10 15

Lys Asp Asp Asp Asp Lys
20

<210> 72
<211> 3055
<212> DNA
<213> Artificial Sequence

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

<400> 72
ctgcgcgctc gctcgctcac tgaggccgcc cgggcaaagc ccgggcgtcg ggcgaccttt 60

ggtcgcccgg cctcagtgag cgagcgagcg cgcagagagg gagtggccaa ctccatcact 120

aggggttcct gcggcctaag cttgagcgga gttccaattg tactgtacag aaccatggtc 180

acatgtttaa cgctagcgtg ccgacctggt aaactgatca gtgggtgcac ttaggactgc 240

gtcttacgct aatcacatgc gtgcggccgc tttattctat tttcccagta aaataaagtt 300

ttagtaaact ctgcatcttt aaagaattat tttggcattt atttctaaaa tggcatagta 360

ttttgtattt gtgaagtctt acaaggttat cttattaata aaattcaaac atcctaggta 420

aaaaaaaaaa aaggtcagaa ttgtttagtg actgtaattt tcttttgcgc actaaggaaa 480

gtgcaaagta acttagagtg actgaaactt cacagaatag ggttgaagat tgaattcata 540

actatcccaa ggtaccacta aagaattatt cttttacatt tcagcgcact tggtccacgt 600

cgacgctgcc agagccctgt ggccgcttcg aagattttgg aggtcaacgg gtttctgtcc 660

tccccttccc cactcgcaag cagatcagta tgtactgtca tgggatcaac agcttaacct 720

cgcctatgtc ggagcagtgc ctcaccgcgg gatcaagcaa gtaaggacac attggctcct 780

tgaactcgtc accacgagag gatcgacggg aaggggggctt tcgtacaact tcactcatct 840

cgatggctat ttggatctcc tccgcgagaa tcagttgttg ccaggcttcg aattgatggg 900

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cctcgtgtcg tcgctcgcga ggagatacat tggtcgctac ggtttggcgc atgtgtcaaa 1020

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cagaccgccg cacgtgcagc tgttgcgaaa acccgtgttg actgcgatgg ggcttctggc 1680

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cgctgtcacc cttcgcctca gaggggtccc gcctggtccc ggcttggtat acgtcactag 1920

atatctcgac aatggactgt gcagccccga cggagagtgg cggaggctgg gacggccggt 1980

gtttccgaca gccgagcagt ttagacggat gagggccgct gaggaccccg tggcagcggc 2040

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gtccaaatgc ttgtggacgt atgaaattca gttttcccaa gacgggaaag cgtacactcc 2280

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