SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> Mutated tRNA for codon expansion

<130> C1-A1833P

<150> JP 2018-243478
<151> 2018-12-26

<160> 203

<170> PatentIn version 3.5

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ccgcauagcu ccacca 76

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ccgcuuagcu ccacca 76

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uccucccgga ugcacca 77

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uccugucggg cgcgcca 77

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uccugcaggg cgcgcca 77

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cugcagggga cacca 75

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ccagucagag gagcca 76

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uccggccccc gcaacca 77

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cagguacccc agcca 75

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cucguacccc agcca 75

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ccccuagggg acgcca 76

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cuucgcccgc ucca 74

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cucguuuccc gcucca 76

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cccauuagcc acccca 76

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ccagcagggg ccacca 76

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gggguucaag ucccccccu cgcacca 87

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ccugcacgac ccacca 76

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ucccgucgua gccacca 77

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ccgaguccgg gcacca 76

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uccucuauca ccgacca 77

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uccucucgug ccgacca 77

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uccucucucg ccgacca 77

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ucccgggcag guucgacucc ugugaucuuc cgcca 95

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cagaguucga aucucugcgc uuccgcca 88

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ccgggggguuc aaaucccccu cucuccgcca 90

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gcauccgggg uucgaauccc cgccucaccg cca 93

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gggggguucga aucccccccu caccgcca 88

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cuggguauca gcacca 76

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ccgguagucg gcacca 76

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cucuccgccc cugcca 76

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gguucgaauc cuuccccccac cacca 85

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gguucgaauc cuuccccccac cacca 85

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ccgucaucac ccacca 76

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uccacucgga cgcacca 77

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uccaauugaa cgcacca 77

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uacuccccgc ca 72

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<212> RNA
<213> Methanosarcina mazei

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gggguuuccgc ca 72

<210> 49
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<223> n is a, c, g, or u

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ccagucagag ccgcca 76

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uccccuauca cccgcca 77

<210> 51
<211> 432
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<400> 51

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Val Ala Phe Ser Gly Gly Leu Asp Ser Thr Val Leu Leu His Gln Leu
20 25 30

Val Gln Trp Arg Thr Glu Asn Pro Gly Val Ala Leu Arg Ala Ile His
35 40 45

Val His His Gly Leu Ser Ala Asn Ala Asp Ala Trp Val Thr His Cys
50 55 60

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Glu Asn Val Cys Gln Gln Trp Gln Val Pro Leu Val Val Glu Arg Val
65                  70                  75                  80

Gln Leu Ala Gln Glu Gly Leu Gly Ile Glu Ala Gln Ala Arg Gln Ala
                85                  90                  95

Arg Tyr Gln Ala Phe Ala Arg Thr Leu Leu Pro Gly Glu Val Leu Val
            100                 105                 110

Thr Ala Gln His Leu Asp Asp Gln Cys Glu Thr Phe Leu Leu Ala Leu
        115                 120                 125

Lys Arg Gly Ser Gly Pro Ala Gly Leu Ser Ala Met Ala Glu Val Ser
    130                 135                 140

Glu Phe Ala Gly Thr Arg Leu Ile Arg Pro Leu Leu Ala Arg Thr Arg
145                 150                 155                 160

Gly Glu Leu Val Gln Trp Ala Arg Gln Tyr Asp Leu Arg Trp Ile Glu
                165                 170                 175

Asp Glu Ser Asn Gln Asp Asp Ser Tyr Asp Arg Asn Phe Leu Arg Leu
            180                 185                 190

Arg Val Val Pro Leu Leu Gln Gln Arg Trp Pro His Phe Ala Glu Ala
        195                 200                 205

Thr Ala Arg Ser Ala Ala Leu Cys Ala Glu Gln Glu Ser Leu Leu Asp
    210                 215                 220

Glu Leu Leu Ala Asp Asp Leu Ala His Cys Gln Ser Pro Gln Gly Thr
225                 230                 235                 240

Leu Gln Ile Val Pro Met Leu Ala Met Ser Asp Ala Arg Arg Ala Ala
                245                 250                 255

Ile Ile Arg Arg Trp Leu Ala Gly Gln Asn Ala Pro Met Pro Ser Arg
            260                 265                 270
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Asp Ala Leu Val Arg Ile Trp Gln Glu Val Ala Leu Ala Arg Glu Asp
        275                 280                 285

Ala Ser Pro Cys Leu Arg Leu Gly Ala Phe Glu Ile Arg Arg Tyr Gln
    290                 295                 300

Ser Gln Leu Trp Trp Ile Lys Ser Val Thr Gly Gln Ser Glu Asn Ile
305                 310                 315                 320

Val Pro Trp Gln Thr Trp Leu Gln Pro Leu Glu Leu Pro Ala Gly Leu
                325                 330                 335

Gly Ser Val Gln Leu Asn Ala Gly Gly Asp Ile Arg Pro Pro Arg Ala
            340                 345                 350

Asp Glu Ala Val Ser Val Arg Phe Lys Ala Pro Gly Leu Leu His Ile
        355                 360                 365

Val Gly Arg Asn Gly Gly Arg Lys Leu Lys Lys Ile Trp Gln Glu Leu
    370                 375                 380

Gly Val Pro Pro Trp Leu Arg Asp Thr Thr Pro Leu Leu Phe Tyr Gly
385                 390                 395                 400

Glu Thr Leu Ile Ala Ala Ala Gly Val Phe Val Thr Gln Glu Gly Val
                405                 410                 415

Ala Glu Gly Glu Asn Gly Val Ser Phe Val Trp Gln Lys Thr Leu Ser
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<210> 52
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<212> PRT
<213> Methanosarcina acetivorans

<400> 52

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            20                  25                  30

Val Glu Thr Leu Pro Leu Leu Val Arg Leu Asn Pro Thr Ile Pro Tyr
        35                  40                  45

Lys Thr Arg Gly Asn Ala Ala Ile Ala Leu Lys Leu Lys Thr Asp Cys
    50                  55                  60

Pro Glu Lys Ile Ile Ala His Val Thr Ser Arg Ile Glu Glu Phe Ala
65                  70                  75                  80

Arg Met Glu Cys Glu Lys Thr Asn Pro Gly Ala Val Phe Ile Gln Glu
                85                  90                  95

Lys Asp Tyr Arg Ser Leu Lys Pro Ile Leu Leu Ser Phe Leu Glu Lys
            100                 105                 110

Ala Val Lys Asp Val Ile Glu Ile Glu Thr Ala Lys His Leu Ile Ser
        115                 120                 125

Glu Leu Gly Ile Ser Ser Lys Ser Phe Lys Asn Gly Arg Gly Leu Ile
    130                 135                 140

Gly Ala Leu Ala Ala Cys Gly Ala Met Leu Asn Pro Glu Lys Trp Asp
145                 150                 155                 160

Cys Thr Phe Glu His Leu Ala Tyr Arg Gln Lys Lys Lys Trp Gly Ser
                165                 170                 175

Pro Arg Asp Val Asn Lys Asp Ser Phe Phe Glu Ala Asp Arg Gln Thr
            180                 185                 190

Tyr Pro Gly Thr Trp Asp Thr Val Asp Leu Ala Asn Arg Leu Val Val
        195                 200                 205
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Cys Val Pro His Ser Ala Asp Pro Val Leu Phe Gly Ile Arg Gly Glu
    210                 215                 220

Ser Pro Glu Leu Val Ser Lys Ala Ala Ser Leu Ile Arg Ser Glu Pro
225                 230                 235                 240

Val Glu Arg Phe Ala Val Tyr Arg Thr Asn Gln Gly Thr Asp Met His
                245                 250                 255

Leu Leu Pro Ala Ala Ser Ile Ser Glu Ile Arg Asp Met His Ser Tyr
            260                 265                 270

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

His Val Ile Phe Ala Val Arg Asp Gly Lys Gly Asp Glu Ile Asp Cys
    290                 295                 300

Ala Ala Phe Glu Pro Thr Lys Asn Phe Arg Val Leu Ala Arg Arg Leu
305                 310                 315                 320

Leu Leu Gly Asp Gln Ile Phe Leu Ser Gly Ser Val Thr Ser Gly Thr
                325                 330                 335

Leu Asn Ile Glu Lys Met Gln Val Lys Glu Leu Val Leu Leu Tyr Arg
            340                 345                 350

Glu Glu Asn Pro Lys Cys Pro Glu Cys Gly Lys His Met Lys Ser Ala
        355                 360                 365

Gly Gln Gly Gln Gly Phe Arg Cys Lys Lys Cys Gly Thr Arg Ala Ser
    370                 375                 380

Ser Lys Ile Arg Cys Glu Ala Glu Arg Asp Leu Glu Pro Gly Leu Tyr
385                 390                 395                 400

Glu Val Pro Pro Cys Ala Arg Arg His Leu Ala Lys Pro Leu Ala Arg
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405 410 415

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420 425

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Ala

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<210> 55
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<210> 56

<211> 74
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ccccuagggg acgc 74

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ccccuagggg acgc 74

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ccccuagggg acgc 74

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<213> Artificial Sequence

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<210> 63
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<220>
<223> LR-4

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ccccuagggg acgc 74

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<212> DNA
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<223> D-2

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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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<212> DNA
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<223> D-3

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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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<212> DNA
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<223> D-4

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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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<212> DNA

<213> Artificial Sequence

<220>
<223> D-13

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<220>
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ccccuagggg acgcca 76

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<220>
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ccccuagggg acgcca 76

<210> 94
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<220>
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ccccuagggg acgcca 76

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ccccuagggg acgcca 76

<210> 96
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<220>
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ccccuagggg acgcca 76

<210> 97
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<220>
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<222> (35)..(35)
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ccccuagggg acgcca 76

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<220>
<223> AAtR-12

<220>
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<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

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ccccuagggg acgcca 76

<210> 102
<211> 76
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<220>
<223> AAtR-13

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<210> 103
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<220>
<223> AAtR-14

<400> 103
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ccccuagggg acgcca 76

<210> 104
<211> 76
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<220>
<223> AAtR-15

<400> 104
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ccccuagggg acgcca 76

<210> 105
<211> 76
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<220>
<223> AAtR-16

<220>
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<223> n = lysidine (2-lysylcytidine)

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ccccuagggg acgcca 76

<210> 106
<211> 76
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<220>
<223> AAtR-17

<400> 106

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ccccuagggg acgcca 76

<210> 107
<211> 76
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<220>
<223> AAtR-18

<400> 107
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uccggccccc gcaaca 76

<210> 108
<211> 97
<212> DNA
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<220>
<223> D-14

<400> 108
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<210> 109
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-15

<400> 109
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tattggtttt tcaattattc cgattggtta agcttcg 97

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<212> DNA

<213> Artificial Sequence

<220>
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<210> 111
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<212> DNA
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<220>
<223> D-17

<400> 111
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tattggtttt cttattattc cgattggtta agcttcg 97

<210> 112
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-18

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tattggtttt ctaattattc cgattggtta agcttcg 97

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

<220>
<223> D-19

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tattggtttt ctgattattc cgattggtta agcttcg 97

<210> 114
<211> 97
<212> DNA
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<220>
<223> D-20

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tattggtttt gttattattc cgattggtta agcttcg 97

<210> 115
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-21

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tattggtttt gtaattattc cgattggtta agcttcg 97

<210> 116
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-22

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tattggtttt gtgattattc cgattggtta agcttcg 97

<210> 117
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-23

<400> 117
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tattctattt ggtattattc cgattctata agcttcg 97

<210> 118
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-24

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tattctattt ggaattattc cgattctata agcttcg 97

<210> 119
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-25

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tattctattt gggattattc cgattctata agcttcg 97

<210> 120
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<212> RNA
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<220>
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gauugguuaa gcuucg 76

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<211> 76
<212> RNA
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<220>
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gauugguuaa gcuucg 76

<210> 122
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<212> RNA
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<220>
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gauugguuaa gcuucg 76

<210> 123
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-4

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gauugguuaa gcuucg 76

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<212> RNA
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<220>
<223> mR-5

<400> 124
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gauugguuaa gcuucg 76

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<211> 76
<212> RNA
<213> Artificial Sequence

<220>
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<400> 125
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gauugguuaa gcuucg 76

<210> 126
<211> 76
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<220>
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gauugguuaa gcuucg 76

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<211> 76
<212> RNA
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<220>
<223> mR-8

<400> 127
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gauugguuaa gcuucg 76

<210> 128

<211> 76
<212> RNA
<213> Artificial Sequence

<220>
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<400> 128
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gauugguuaa gcuucg 76

<210> 129
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-10

<400> 129
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gauucuauaa gcuucg 76

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<212> RNA
<213> Artificial Sequence

<220>
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gauucuauaa gcuucg 76

<210> 131
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<212> RNA
<213> Artificial Sequence

<220>
<223> mR-12

<400> 131

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gauucuauaa gcuucg 76

<210> 132
<211> 34
<212> RNA
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<220>
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<400> 132
ggagcgguag uucagucggu uagaauaccu gcuu 34

<210> 133
<211> 40
<212> RNA
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<220>
<223> FR-7

<400> 133
aggugcaggg ggucgcgggu ucgagucccg uccguuccgc 40

<210> 134
<211> 75
<212> RNA
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<220>
<223> LR-5

<220>
<221> misc_feature
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<223> n = lysidine (2-lysylcytidine)

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ucccguccgu uccgc 75

<210> 135

<211> 33
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<400> 135
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<210> 136
<211> 40
<212> RNA
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<220>
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<400> 136
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<210> 137
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> LR-6

<220>
<221> misc_feature
<222> (34)..(34)
<223> n = lysidine (2-lysylcytidine)

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ccagucagag ccgc 74

<210> 138
<211> 74
<212> RNA
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<220>
<223> AR-1

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = agmatidine (2-agmatinylcytidine)

<400> 138
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ccccuagggg acgc 74

<210> 139
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<220>
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<400> 139
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<210> 140
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<220>
<223> LR-7

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ccccuagggg acgc 74

<210> 141
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<400> 141
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<210> 142
<211> 74
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<220>
<223> LR-8

<220>
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<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

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ccccuagggg acgc 74

<210> 143
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<220>
<223> D-26

<400> 143
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gcaggggtc gcgggttcga gtcccgtccg ttccgc 96

<210> 144
<211> 96
<212> DNA
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<220>
<223> D-27

<400> 144

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gcaggggtc gcgggttcga gtcccgtccg ttccgc 96

<210> 145
<211> 96
<212> DNA
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<220>
<223> D-28

<400> 145
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gcaggggtc gcgggttcga gtcccgtccg ttccgc 96

<210> 146
<211> 95
<212> DNA
<213> Artificial Sequence

<220>
<223> D-29

<400> 146
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ccgtatgtca ctggttcgag tccagtcaga gccgc 95

<210> 147
<211> 95
<212> DNA
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<220>
<223> D-30

<400> 147
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ccgtatgtca ctggttcgag tccagtcaga gccgc 95

<210> 148
<211> 95
<212> DNA

<213> Artificial Sequence

<220>
<223> D-31

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ccgtatgtca ctggttcgag tccagtcaga gccgc 95

<210> 149
<211> 95
<212> DNA
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<220>
<223> D-32

<400> 149
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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

<210> 150
<211> 95
<212> DNA
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<220>
<223> D-33

<400> 150
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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

<210> 151
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<212> DNA
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<220>
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<400> 151
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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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<212> DNA
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<220>
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ggcggtaaca ggggttcgaa tcccctaggg gacgc 95

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<212> RNA
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<220>
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<400> 153
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ucccguccgu uccgc 75

<210> 154
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ucccguccgu uccgc 75

<210> 155
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<220>
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ucccguccgu uccgc 75

<210> 156
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<212> RNA
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<220>
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<400> 156
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ccagucagag ccgc 74

<210> 157
<211> 74
<212> RNA
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<220>
<223> TR-18

<400> 157
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ccagucagag ccgc 74

<210> 158
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> TR-19

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ccagucagag ccgc 74

<210> 159
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> TR-20

<400> 159
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ccccuagggg acgc 74

<210> 160
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> TR-21

<400> 160
gucccc uucg ucuagaggcc caggacaccg cccuccgacg gcgguaacag ggguucgaau 60

ccccuagggg acgc 74

<210> 161
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> TR-22

<400> 161
gucccc uucg ucuagaggcc caggacaccg cccuaauacg gcgguaacag ggguucgaau 60

ccccuagggg acgc 74

<210> 162
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> TR-23

<400> 162
gucccccuucg ucuagaggcc caggacaccg cccucauacg gcgguaacag ggguucgaau 60

ccccuagggg acgc 74

<210> 163
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-36

<400> 163
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttat 60

tattggtttt cgtattattc cgattggtta agcttcg 97

<210> 164
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-37

<400> 164
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttat 60

tattggtttt cgaattattc cgattggtta agcttcg 97

<210> 165
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-38

<400> 165
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttat 60

tattggtttt cggattattc cgattggtta agcttcg 97

<210> 166

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

<220>
<223> D-39

<400> 166
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttct 60

actaggtttt attctactac cgctaggtta agcttcg 97

<210> 167
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-40

<400> 167
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttct 60

actaggtttt atactactac cgctaggtta agcttcg 97

<210> 168
<211> 97
<212> DNA
<213> Artificial Sequence

<220>
<223> D-41

<400> 168
ggcgtaatac gactcactat agggttaact ttaagaagga gatatacata tgacttttct 60

actaggtttt atgctactac cgctaggtta agcttcg 97

<210> 169
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-13

<400> 169

ggguuaacuu uaagaaggag auauacauau gacuuuuauu auugguuuuc guauuauucc 60

gauugguuaa gcuucg 76

<210> 170
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-14

<400> 170
ggguuaacuu uaagaaggag auauacauau gacuuuuauu auugguuuuc gaauuauucc 60

gauugguuaa gcuucg 76

<210> 171
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-15

<400> 171
ggguuaacuu uaagaaggag auauacauau gacuuuuauu auugguuuuc ggauuauucc 60

gauugguuaa gcuucg 76

<210> 172
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-16

<400> 172
ggguuaacuu uaagaaggag auauacauau gacuuuucua cuagguuuua uucuacuacc 60

gcuagguuaa gcuucg 76

<210> 173
<211> 76
<212> RNA

<213> Artificial Sequence

<220>
<223> mR-17

<400> 173
ggguuaacuu uaagaaggag auauacauau gacuuuucua cuagguuuua uacuacuacc 60

gcuagguuaa gcuucg 76

<210> 174
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> mR-18

<400> 174
ggguuaacuu uaagaaggag auauacauau gacuuuucua cuagguuuua ugcuacuacc 60

gcuagguuaa gcuucg 76

<210> 175
<211> 77
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-19

<400> 175
ggagcgguag uucagucggu uagaauaccu gcuuaaggug cagggggucg cggguucgag 60

ucccguccgu uccgcca 77

<210> 176
<211> 77
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-20

<400> 176
ggagcgguag uucagucggu uagaauaccu gcuuuaggug cagggggucg cggguucgag 60

ucccguccgu uccgcca 77

<210> 177
<211> 77
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-21

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 177
ggagcgguag uucagucggu uagaauaccu gcuunaggug caggggggucg cgggguucgag 60

ucccguccgu uccgcca 77

<210> 178
<211> 77
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-22

<400> 178
ggagcgguag uucagucggu uagaauaccu gcuucaggug caggggggucg cgggguucgag 60

ucccguccgu uccgcca 77

<210> 179
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-23

<400> 179
ggcucuguag uucagucggu agaacggcgg auuaagguuc cguaugucac ugguucgagu 60

ccagucagag ccgcca 76

<210> 180
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-24

<400> 180
ggcucuguag uucagucggu agaacggcgg auuuagguuc cguaugucac ugguucgagu 60

ccagucagag ccgcca 76

<210> 181
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-25

<220>
<221> misc_feature
<222> (34)..(34)
<223> n = lysidine (2-lysylcytidine)

<400> 181
ggcucuguag uucagucggu agaacggcgg auunagguuc cguaugucac ugguucgagu 60

ccagucagag ccgcca 76

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

<220>
<223> AAtR-26

<400> 182
ggcucuguag uucagucggu agaacggcgg auucagguuc cguaugucac ugguucgagu 60

ccagucagag ccgcca 76

<210> 183

<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-27

<400> 183
gucccc uucg ucuagaggcc caggacaccg cccuuagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 184
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-28

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 184
gucccc uucg ucuagaggcc caggacaccg cccunagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 185
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-29

<400> 185
gucccc uucg ucuagaggcc caggacaccg cccuuagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 186
<211> 76
<212> RNA

<213> Artificial Sequence

<220>
<223> AAtR-30

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 186
gucccc uucg ucuagaggcc caggacaccg cccunagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 187
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-31

<400> 187
gucccc uucg ucuagaggcc caggacaccg cccuuagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 188
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-32

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 188
gucccc uucg ucuagaggcc caggacaccg cccunagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 189
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-33

<400> 189
gucccccuucg ucuagaggcc caggacaccg cccugcgacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 190
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-34

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 190
gucccccuucg ucuagaggcc caggacaccg cccuncgacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 191
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-35

<400> 191
gucccccuucg ucuagaggcc caggacaccg cccuccgacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 192

<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-36

<400> 192
gucccccuucg ucuagaggcc caggacaccg cccuaauacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 193
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-37

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = lysidine (2-lysylcytidine)

<400> 193
gucccccuucg ucuagaggcc caggacaccg cccunauacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 194
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-38

<400> 194
gucccccuucg ucuagaggcc caggacaccg cccucauacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 195
<211> 76
<212> RNA

<213> Artificial Sequence

<220>
<223> AAtR-39

<400> 195
gucccccuucg ucuagaggcc caggacaccg cccuuagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 196
<211> 76
<212> RNA
<213> Artificial Sequence

<220>
<223> AAtR-40

<220>
<221> misc_feature
<222> (35)..(35)
<223> n = agmatidine (2-agmatinylcytidine)

<400> 196
gucccccuucg ucuagaggcc caggacaccg cccunagacg gcgguaacag ggguucgaau 60

ccccuagggg acgcca 76

<210> 197
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = lysidine (2-lysylcytidine)

<400> 197
cccunacacg 10

<210> 198

<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<400> 198
cccuuacacg 10

<210> 199
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = lysidine (2-lysylcytidine)

<400> 199
cccunccacg 10

<210> 200
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<400> 200
cccuuccacg 10

<210> 201
<211> 74
<212> RNA
<213> Artificial Sequence

<220>
<223> FR6 + FR7

<400> 201

ggagcgguag uucagucggu uagaauaccu gcuuaggugc agggggucgc ggguucgagu 60

cccguccguu ccgc 74

<210> 202
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = lysidine (2-lysylcytidine)

<400> 202
cccunauacg 10

<210> 203
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> tRNA fragment

<400> 203
cccuuauacg 10