SEQUENCE LISTING

<110> Allozyne, Inc.
Dieci, Georgio

<120> Novel Nucleic Acid Molecules

<130> ALL - P1530PCT

<150> US 61/843,959
<151> 2013-07-09

<160> 77

<170> PatentIn version 3.3

<210> 1
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<213> Methanosarcina barkeri

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ggaaacctga tcatgtagat cgtggacttc taaatccgca gccgggtaga ttcccggggt 60

ttccg 65

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gggtttccg 69

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<213> Methanosarcina mazei

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gggtttccg 69

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<213> Methanococcoides burtonii

<400> 4
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gagtttccg 69

<210> 5
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<213> Desulfobacterium hafniense

<400> 5
ggaaacctga tcatgtagat cgtggactct aaatccgcag ccgggtagat tcccggggtt 60

tccg 64

<210> 6
<211> 18
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<223> Synthetic sequence: Terminator sequence used for WT and mutant A - box and/or B-box tRNApyl constructs

<400> 6
gacaagtgcg gttttttt 18

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<223> Synthetic sequence: tRNApyl Methanosarcina mazei A10G mutation ('tRNA-A1'); coding sequence

<400> 7
ggaaacctgg tcatgtagat cgaatggact ctaaatccgt tcagccgggt tagattcccg 60

gggtttccg 69

<210> 8
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<400> 8
ggaaacctgg tcatgtagat cgaatggact ctaaatccgt tcagccgggt tcgattcccg 60

gggtttccg 69

<210> 9
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<400> 9
ggaaacctga tcatgtagat cgaatggact ctaaatccgt tcagccgggt tcgattcccg 60

gggtttccg 69

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A52C mutations ('tRNA-A2B'); coding sequence

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gggtttccg 69

<210> 11
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gggtttccg 69

<210> 12
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<400> 12
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<210> 13
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<223> Synthetic sequence: Spacer used in 7SL constructs

<400> 13
acca 4

<210> 14
<211> 149
<212> DNA
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<220>
<223> Synthetic sequence: 7SL tRNA-WT construct

<400> 14
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accaggaaac ctgatcatgt agatcgaatg gactctaaat ccgttcagcc gggttagatt 120

cccggggttt ccggacaagt gcggttttt 149

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<220>
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<400> 15
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cccggggttt ccggacaagt gcggttttt 149

<210> 16
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<223> Synthetic sequence: 7SL tRNA-A1 construct

<400> 16
cccagttgat gacgtcacca taccacagct tctagtgcta ttctgcgccg gtatccgacc 60

accaggaaac ctggtcatgt agatcgaatg gactctaaat ccgttcagcc gggttagatt 120

cccggggttt ccggacaagt gcggttttt 149

<210> 17
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<220>
<223> Synthetic sequence: 7SL tRNA-AB construct

<400> 17
cccagttgat gacgtcacca taccacagct tctagtgcta ttctgcgccg gtatccgacc 60

accaggaaac ctggtcatgt agatcgaatg gactctaaat ccgttcagcc gggttcgatt 120

cccggggttt ccggacaagt gcggttttt 149

<210> 18
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<223> Synthetic sequence: 7SL tRNA-A2B construct

<400> 18
cccagttgat gacgtcacca taccacagct tctagtgcta ttctgcgccg gtatccgacc 60

accaggaaac ctggtcaagt agatcgaatg gactctaaat ccgttcagcc gggttcgatt 120

cccggggttt ccggacaagt gcggttttt 149

<210> 19
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<213> Artificial sequence

<220>
<223> Synthetic sequence: Terminator sequence used in the 7SL, Vault, EBER constructs

<400> 19
gacaagtgcg gttttt 16

<210> 20
<211> 98
<212> DNA
<213> Homo sapiens

<400> 20
tggtcgctga gtcatgctga agcactctct ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caataaaata taatccgaaa gcaacctc 98

<210> 21
<211> 6
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Spacer used for Vault-tRNA constructs

<400> 21
ccacca 6

<210> 22
<211> 189
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Vault tRNA-WT construct

<400> 22
tggtcgctga gtcatgctga agcactctct ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caataaaata taatccgaaa gcaacctccc accaggaaac ctgatcatgt 120

agatcgaatg gactctaaat ccgttcagcc gggttagatt cccggggttt ccggacaagt 180

gcggttttt 189

<210> 23
<211> 189
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<220>
<223> Synthetic sequence: Vault tRNA-B construct

<400> 23
tggtcgctga gtcatgctga agcactctct ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caataaaata taatccgaaa gcaacctccc accaggaaac ctgatcatgt 120

agatcgaatg gactctaaat ccgttcagcc gggttcgatt cccggggttt ccggacaagt 180

gcggttttt 189

<210> 24
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<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Vault tRNA-AB construct

<400> 24
tggtcgctga gtcatgctga agcactctct ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caataaaata taatccgaaa gcaacctccc accaggaaac ctggtcatgt 120

agatcgaatg gactctaaat ccgttcagcc gggttcgatt cccggggttt ccggacaagt 180

gcggttttt 189

<210> 25
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<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Vault tRNA-A2B construct

<400> 25
tggtcgctga gtcatgctga agcactctct ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caataaaata taatccgaaa gcaacctccc accaggaaac ctggtcaagt 120

agatcgaatg gactctaaat ccgttcagcc gggttcgatt cccggggttt ccggacaagt 180

gcggttttt 189

<210> 26
<211> 80
<212> DNA
<213> Epstein-Barr virus

<400> 26
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac 80

<210> 27
<211> 4
<212> DNA
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<220>
<223> Synthetic sequence: Spacer used in EBER constructs

<400> 27
acca 4

<210> 28
<211> 170
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER2 tRNA-WT construct

<400> 28
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac accaggaaac ctgatcatgt agatcgaatg gactctaaat 120

ccgttcagcc gggttagatt cccggggttt ccgggacaag tgcggttttt 170

<210> 29

<211> 170
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER2 tRNA-B construct

<400> 29
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac accaggaaac ctgatcatgt agatcgaatg gactctaaat 120

ccgttcagcc gggttcgatt cccggggttt ccgggacaag tgcggttttt 170

<210> 30
<211> 170
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER2 tRNA-A1 construct

<400> 30
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac accaggaaac ctggtcatgt agatcgaatg gactctaaat 120

ccgttcagcc gggttagatt cccggggttt ccgggacaag tgcggttttt 170

<210> 31
<211> 170
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER2 tRNA-A1B construct

<400> 31
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac accaggaaac ctggtcatgt agatcgaatg gactctaaat 120

ccgttcagcc gggttcgatt cccggggttt ccgggacaag tgcggttttt 170

<210> 32
<211> 170
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER2 tRNA-A2B construct

<400> 32
agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg tttaccagca tgtatagagt 60

tacggttcgc tacatcaaac accaggaaac ctggtcaagt agatcgaatg gactctaaat 120

ccgttcagcc gggttcgatt cccggggttt ccgggacaag tgcggttttt 170

<210> 33
<211> 101
<212> DNA
<213> Homo sapiens

<400> 33
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat ccctatcagt 60

gatagagact tataagttcc ctatcagtga tagagacacc a 101

<210> 34
<211> 188
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: H1 tRNA-WT construct

<400> 34
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat ccctatcagt 60

gatagagact tataagttcc ctatcagtga tagagacacc aggaaacctg atcatgtaga 120

tcgaatggac tctaaatccg ttcagccggg ttagattccc ggggtttccg gacaagtgcg 180

gttttttt 188

<210> 35
<211> 188
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: H1 tRNA-B construct

<400> 35
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gatagagact tataagttcc ctatcagtga tagagacacc aggaaacctg atcatgtaga 120

tcgaatggac tctaaatccg ttcagccggg tcagattccc ggggtttccg gacaagtgcg 180

gttttttt 188

<210> 36
<211> 188
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: H1 tRNA-A1 construct

<400> 36
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat ccctatcagt 60

gatagagact tataagttcc ctatcagtga tagagacacc aggaaacctg gtcatgtaga 120

tcgaatggac tctaaatccg ttcagccggg ttagattccc ggggtttccg gacaagtgcg 180

gttttttt 188

<210> 37
<211> 188
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: H1 tRNA-A2 construct

<400> 37
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat ccctatcagt 60

gatagagact tataagttcc ctatcagtga tagagacacc aggaaacctg gtcaagtaga 120

tcgaatggac tctaaatccg ttcagccggg ttagattccc ggggtttccg gacaagtgcg 180

gttttttt 188

<210> 38
<211> 188
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: H1 tRNA-A2B construct

<400> 38
aatatttgca tgtcgctatg tgttctggga aatcaccata aacgtgaaat ccctatcagt 60

gatagagact tataagttcc ctatcagtga tagagacacc aggaaacctg gtcaagtaga 120

tcgaatggac tctaaatccg ttcagccggg tcagattccc ggggtttccg gacaagtgcg 180

gttttttt 188

<210> 39
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Terminator sequence used in the H1-tRNA constructs

<400> 39
gacaagtgcg gttttttt 18

<210> 40
<211> 72
<212> DNA
<213> Mus musculus

<400> 40
tccctggtgg tctagtggtt aggattcggc gctctcaccg ccgcggcccg ggttcgattc 60

tcggtcaggg aa 72

<210> 41
<211> 280
<212> DNA
<213> Mus musculus

<400> 41
gcctgtagta gtccgccgga gcggaggttc caggcgggca agcagtgtat ctgccacggt 60

ggcggagagg ctgtgtgtct gagtgtctcc aggagtcggt agccgtgacc tcgggccgac 120

gctccctggt ggtctagtgg ttaggattcg gcgctctcac cgccgcggcc cgggttcgat 180

tctcggtcag ggaagcctct cttcttcctc tctgcaccct cacttcccca aacctcgctc 240

ctcttccctc gctcactttt gcccaacacc aacgcacacc 280

<210> 42
<211> 196
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 1xtRNAglu-pyl DNA construct

<400> 42
gccgtgacct cgggccgacg ctccctggtg gtctagtggt taggattcgg cgctctcacc 60

gccgcggccc gggttcgatt ctcggtcagg gaagcctctc ccccaaacct cggaaacctg 120

atcatgtaga tcgaatggac tctaaatccg ttcagccggg ttagattccc ggggtttccg 180

cttcttcctc ttttct 196

<210> 43
<211> 648
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 3x tRNAglu-pyl: DNA construct including 3 repeats of the bicistronic construct tRNAglu-tRNApyl

<400> 43
gccgtgacct cgggccgacg ctccctggtg gtctagtggt taggattcgg cgctctcacc 60

gccgcggccc gggttcgatt ctcggtcagg gaagcctctc ccccaaacct cggaaacctg 120

atcatgtaga tcgaatggac tctaaatccg ttcagccggg ttagattccc ggggtttccg 180

cttcttcctc ttttctgcac cctcacttca gctgagccgt gacctcgggc cgacgctccc 240

tggtggtcta gtggttagga ttcggcgctc tcaccgccgc ggcccgggtt cgattctcgg 300

tcagggaagc ctctccccca aacctcggaa acctgatcat gtagatcgaa tggactctaa 360

atccgttcag ccgggttaga ttcccggggt ttccgcttct tcctcttttc tgcaccccaa 420

tattgccgtg acctcgggcc gacgctccct ggtggtctag tggttaggat tcggcgctct 480

caccgccgcg gcccgggttc gattctcggt cagggaagcc tctcccccaa acctcggaaa 540

cctgatcatg tagatcgaat ggactctaaa tccgttcagc cgggttagat tcccggggtt 600

tccgtagcgt ccttttgga aagacaagtg ggtggcgaat tcgatatc 648

<210> 44
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 5' Leader sequence for tRNAglu-pyl constructs

<400> 44
gccgtgacct cgggccgacg c 21

<210> 45
<211> 14
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Terminator sequence used in the tRNAglu-pyl constructs

<400> 45
tagcgtcctt tttg 14

<210> 46
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Terminator sequence used in the tRNAglu-pyl constructs

<400> 46
cttcttcctc ttttct 16

<210> 47
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Intergene sequence used in the tRNAglu-pyl constructs

<400> 47
gcctctcccc caaacctc 18

<210> 48
<211> 72
<212> DNA
<213> Mus musculus

<400> 48
tcctcgttag tatagtggtg agtatccccg cctgtcaccc gcgagaccgg cgttccattc 60

cccgacgggg ag 72

<210> 49
<211> 188
<212> DNA
<213> Mus musculus

<400> 49
tgggtgagac ggaggttgtg ggtcgtgtgt gtcgtcgtag acggtcgggc gacggtgcgt 60

cgtagtcggc gttgtcctcg ttagtatagt ggtgagtatc cccgcctgtc acccgcgaga 120

ccggcgttcc attccccgac ggggagacgt agcgtccttt ttggaaagac aagtgggtgg 180

cccgcggg 188

<210> 50
<211> 177
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 1x tRNAasp-pyl DNA construct

<400> 50
ggtgcgtcgt agtcggcgtt gtcctcgtta gtatagtggt gagtatcccc gcctgtcacc 60

cgcgagaccg gcgttccatt ccccgacggg gagacgtagc cccacctcgg aaacctgatc 120

atgtagatcg aatggactct aaatccgttc agccgggtta gattcccggg gtttccg 177

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

<220>
<223> Synthetic sequence: 2x tRNAasp-pyl: DNA construct including 2 repeats of the bicistronic construct tRNAasp-pyl

<400> 51
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cccgacgggg agacgtagcc ccacctcgga aacctgatca tgtagatcga atggactcta 120

aatccgttca gccgggttag attcccgggg tttccgtagc gtccttttg gaaagacaag 180

gtgcgtcgta gtcggcgttg tcctcgttag tatagtggtg agtatccccg cctgtcaccc 240

gcgagaccgg cgttccattc cccgacgggg agacgtagcc ccacctcgga aacctgatca 300

tgtagatcga atggactcta aatccgttca gccgggttag attcccgggg tttccgtagc 360

gtccttttt 369

<210> 52
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Leader sequence used in the 2xAsp-pyl construct

<400> 52
ggtgcgtcgt agtcggcgtt g 21

<210> 53
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Terminator sequence used in the 2xAsp-pyl construct

<400> 53
tagcgtcctt ttt 13

<210> 54
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: intergene sequence used in the tRNAasp-pyl constructs

<400> 54
acgtagcccc acctc 15

<210> 55
<211> 72
<212> DNA
<213> Homo sapiens

<400> 55
tccctggtgg tctagtggct aggattcggc gctttcaccg ccgcggcccg ggttcgattc 60

ccggtcagga at 72

<210> 56
<211> 70
<212> DNA
<213> Homo sapiens

<400> 56
tccttgttag tatagtggtg agtgtttctg cctgtcatgt ggagactgga gtttgagtcc 60

ccaacaggga 70

<210> 57
<211> 61
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: 7SL-1

<400> 57
cgctccccaa tgacgtaact gccctgcagc ttctagtagc ttttcgcagc gtctccgacc 60

g 61

<210> 58
<211> 62
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: 7SL-2

<400> 58
tctggttgct accatgtgta gcctgcaagc ctctagcagc tcttttgcag cgacgccgac 60

cg 62

<210> 59
<211> 62
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: SL28

<400> 59
taacattgct aatgagtttt gggcacacat tgtcattgat aacatcttat caggagacag 60

gg 62

<210> 60
<211> 49
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: 7L63

<400> 60
acagaggaac taccataaca agaaccaaag agaaatggca tacctcagg 49

<210> 61
<211> 44
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: 7L23

<400> 61
ctccctctca aaactcaagg aaatctagtg ggcatggtgc acat 44

<210> 62
<211> 49
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: 7SL promoter variant: 7L7

<400> 62
aggtactacc caatggtttt ctaaaatact tgcatctgca catgccatg 49

<210> 63
<211> 160
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: EBER promoter variant: EBER1

<400> 63
gatccaaact tttgttttag gatttatgca tccattatcc cgcagttcca cctaaacggg 60

gcttaacgtt gcatcccaga agatgcacgc ttaaccccgc ctacaaccgt gacgtagctg 120

tttaccagca tgtatagagt tacggttcgc tacatcaaac 160

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

<220>
<223> Synthetic sequence: Vault promoter variant: Hvg3

<400> 64
aggtcgctga gtcaagctaa agcaccgttg ttttgactca ctctttgtga cgtaggtctt 60

tctcaccagt caagaaaata caatccgaaa gcaacctctg 100

<210> 65

<211> 98
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Vault promoter variant: Hvg3

<400> 65
tggttgctga gtcatgctaa aacactgttg ttttgactca ctttgtgacg taggtctttc 60

tcaccagtca agaaaatata atccggagat agcctctg 98

<210> 66
<211> 454
<212> PRT
<213> Methanosarcina mazei

<400> 66

Met Asp Lys Lys Pro Leu Asn Thr Leu Ile Ser Ala Thr Gly Leu Trp
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Met Ser Arg Thr Gly Thr Ile His Lys Ile Lys His His Glu Val Ser
20 25 30

Arg Ser Lys Ile Tyr Ile Glu Met Ala Cys Gly Asp His Leu Val Val
35 40 45

Asn Asn Ser Arg Ser Ser Arg Thr Ala Arg Ala Leu Arg His His Lys
50 55 60

Tyr Arg Lys Thr Cys Lys Arg Cys Arg Val Ser Asp Glu Asp Leu Asn
65 70 75 80

Lys Phe Leu Thr Lys Ala Asn Glu Asp Gln Thr Ser Val Lys Val Lys
85 90 95

Val Val Ser Ala Pro Thr Arg Thr Lys Lys Ala Met Pro Lys Ser Val
100 105 110

Ala Arg Ala Pro Lys Pro Leu Glu Asn Thr Glu Ala Ala Gln Ala Gln
115 120 125

Pro Ser Gly Ser Lys Phe Ser Pro Ala Ile Pro Val Ser Thr Gln Glu
130 135 140

Ser Val Ser Val Pro Ala Ser Val Ser Thr Ser Ile Ser Ser Ile Ser
145 150 155 160

Thr Gly Ala Thr Ala Ser Ala Leu Val Lys Gly Asn Thr Asn Pro Ile
165 170 175

Thr Ser Met Ser Ala Pro Val Gln Ala Ser Ala Pro Ala Leu Thr Lys
180 185 190

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Ser Gln Thr Asp Arg Leu Glu Val Leu Leu Asn Pro Lys Asp Glu Ile
        195                 200                 205

Ser Leu Asn Ser Gly Lys Pro Phe Arg Glu Leu Glu Ser Glu Leu Leu
    210                 215                 220

Ser Arg Arg Lys Lys Asp Leu Gln Gln Ile Tyr Ala Glu Glu Arg Glu
225                 230                 235                 240

Asn Tyr Leu Gly Lys Leu Glu Arg Glu Ile Thr Arg Phe Phe Val Asp
                245                 250                 255

Arg Gly Phe Leu Glu Ile Lys Ser Pro Ile Leu Ile Pro Leu Glu Tyr
            260                 265                 270

Ile Glu Arg Met Gly Ile Asp Asn Asp Thr Glu Leu Ser Lys Gln Ile
        275                 280                 285

Phe Arg Val Asp Lys Asn Phe Cys Leu Arg Pro Met Leu Ala Pro Asn
    290                 295                 300

Leu Tyr Asn Tyr Leu Arg Lys Leu Asp Arg Ala Leu Pro Asp Pro Ile
305                 310                 315                 320

Lys Ile Phe Glu Ile Gly Pro Cys Tyr Arg Lys Glu Ser Asp Gly Lys
                325                 330                 335

Glu His Leu Glu Glu Phe Thr Met Leu Asn Phe Cys Gln Met Gly Ser
            340                 345                 350

Gly Cys Thr Arg Glu Asn Leu Glu Ser Ile Ile Thr Asp Phe Leu Asn
        355                 360                 365

His Leu Gly Ile Asp Phe Lys Ile Val Gly Asp Ser Cys Met Val Tyr
    370                 375                 380

Gly Asp Thr Leu Asp Val Met His Gly Asp Leu Glu Leu Ser Ser Ala
385                 390                 395                 400

Val Val Gly Pro Ile Pro Leu Asp Arg Glu Trp Gly Ile Asp Lys Pro
                405                 410                 415

Trp Ile Gly Ala Gly Phe Gly Leu Glu Arg Leu Leu Lys Val Lys His
            420                 425                 430

Asp Phe Lys Asn Ile Lys Arg Ala Ala Arg Ser Glu Ser Tyr Tyr Asn
        435                 440                 445

Gly Ile Ser Thr Asn Leu
    450
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<210> 67
<211> 1365
<212> DNA
<213> Methanosarcina mazei

<400> 67
atggataaaa aaccattgaa tacgctcatt agcgcaactg ggctgtggat gagccgtacg 60

ggaacgattc ataaaatcaa gcaccacgaa gtatctcgta gcaaaatcta tatcgagatg 120

gcttgcggcg accatctcgt ggtaaacaat agcaggtcct cacggaccgc ccgtgccttg 180

cgccaccaca aatatcgtaa aacttgtaag agatgtagag tgagcgacga ggatctgaac 240

aagtttctta caaaggccaa cgaggaccaa accagcgtca aagtcaaggt tgtgagcgcc 300

ccaacacgca ccaagaaggc catgcccaag tctgttgcgc gggcaccgaa acctctggag 360

aatactgagg ccgctcaggc ccagcccagc ggttcaaaat tctctcctgc cattccagtt 420

agcactcaag agtcagtcag cgtgcccgcc tctgtgtcta catccatcag ctctatctcc 480

accggcgcaa cagcctctgc cctggtgaag ggtaatacga accctatcac gagtatgtcc 540

gcacccgtgc aagcaagtgc tcccgcactc actaaatccc aaacggaccg gctggaggtc 600

ctgcttaacc ctaaggatga aatcagcctg aacagtggaa aaccgtttcg agaactggaa 660

tccgagctct taagccggcg aaagaaagat ttgcaacaga tttacgccga agaacgggaa 720

aattatctgg gcaagctgga gagagaaatc actaggttct ttgtagatag gggctttctg 780

gagattaaga gtcccatatt gatccctctc gaatacattg agcgtatggg catcgacaac 840

gacacagaac ttagcaagca gatctttcgg gtggacaaaa acttctgcct caggcctatg 900

ctggctccaa atctgtacaa ctatcttagg aaactcgacc gggccctgcc cgatcccatt 960

aaaatcttcg aaattggacc ttgctataga aaggagagcg atggcaagga gcacctggag 1020

gagtttacta tgctcaattt ctgtcaaatg ggctccggct gcacacgtga gaacctcgaa 1080

tccattataa ccgacttcct gaatcacctg gggattgatt tcaagatcgt gggcgactcc 1140

tgcatggtgt ttggtgatac gttggatgtg atgcacggag atttggaatt gtcaagcgct 1200

gtggtaggcc ccattcctct cgacagggag tggggtattg acaagccctg gatcggcgca 1260

ggttttggac tggagcgcct gttgaaggtt aagcatgact tcaaaaacat aaagagagcc 1320

gcacgcagcg aatcctatta taatggaatc agcactaact tgtaa 1365

<210> 68
<211> 10
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Spacer region

<400> 68
ctttgtttct 10

<210> 69
<211> 105
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic construct

<400> 69
atggtcgctg agtcatgctg aagcactctc tttttgactc actctttgtg acgtaggtct 60

ttctcaccag tcaataaaat ataatccgaa agcaacctcc cacca 105

<210> 70
<211> 80
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic construct

<400> 70
gcacgcttaa ccccgcctac aaccgtgacg tagctgttta ccagcatgta tagagttacg 60

gttcgctaca tcaaacacca 80

<210> 71
<211> 75
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic construct

<400> 71
ccagtagata tcccagttga tgacgtcacc ataccacagc ttctagtgct attctgcgcc 60

ggtatccgac cacca 75

<210> 72
<211> 69
<212> DNA
<213> Methanosarcina barkeri

<400> 72
gggaacctga tcatgtagat cgaatggact ctaaatccgt tcagccgggt tagattcccg 60

gggtttccg 69

<210> 73
<211> 69
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Mb pyltRNA (A+B box)

<400> 73
gggaacctgc tcaggtagag cgaatggact ctaaatccgt tcagccgggt tcgattcccg 60

gggtttccg 69

<210> 74
<211> 69
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Mm pyltRNA (A+B box)

<400> 74
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gggtttccg 69

<210> 75
<211> 25
<212> DNA
<213> Homo sapiens

<400> 75
tgacgtaggt ctttctcacc agtca 25

<210> 76
<211> 21
<212> DNA
<213> Epstein-Barr virus

<400> 76
gcacgcttaa ccccgcctac a 21

<210> 77
<211> 19
<212> DNA
<213> Epstein-Barr virus

<400> 77
accgtgacgt agctgttta 19