SEQUENCE LISTING

<110> Japan Science and Technology Agency

<120> Method of Replicating or Amplifying Circular DNA

<130> FA4002-17267

<150> JP 2017-037489

<151> 2017-02-28

<160> 41

<170> PatentIn version 3.5

<210> 1

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (consensus)

<220>

<221> misc_feature

<222> (2)..(2)

<223> n is a, c, g, or t

<220>

<221> misc_feature

<222> (3)..(3)

<223> r is a or g

<220>

<221> misc_feature

<222> (4)..(4)

<223> w is a or t

<220>

<221> misc_feature

<222> (13)..(13)

<223> k is g or t

<400> 1

gnrwgttgta acka 14

<210> 2

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (consensus)

<220>

<221> misc_feature

<222> (2)..(2)

<223> k is g or t

<220>

<221> misc_feature

<222> (4)..(4)

<223> w is a or t

<220>

<221> misc_feature

<222> (13)..(13)

<223> k is g or t

<400> 2

gkawgttgta acka 14

<210> 3

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terA, B, D, E, or H)

<400> 3

gtatgttgta acta 14

<210> 4

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terA, B, D, E, or H)

<400> 4

agtatgttgt aactaaag 18

<210> 5

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terC)

<400> 5

ggatgttgta acta 14

<210> 6

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terF)

<400> 6

gtatgttgta acga 14

<210> 7

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terG)

<400> 7

ggatgttgta acta 14

<210> 8

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terI)

<400> 8

ggaagttgta acga 14

<210> 9

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terJ)

<400> 9

gtaagttgta acga 14

<210> 10

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (Bacillus, consensus)

<220>

<221> misc_feature

<222> (3)..(3)

<223> w is a or t

<220>

<221> misc_feature

<222> (4)..(4)

<223> r is a or g

<220>

<221> misc_feature

<222> (6)..(10)

<223> n is a, c, g or t

<220>

<221> misc_feature

<222> (11)..(11)

<223> y is t or c

<220>

<221> misc_feature

<222> (12)..(12)

<223> n is a, c, g or t

<220>

<221> misc_feature

<222> (19)..(19)

<223> n is a, c, g or t

<400> 10

acwrannnnn ynatgtacna aat 23

<210> 11

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (Bacillus subtilis, consensus)

<220>

<221> misc_feature

<222> (8)..(8)

<223> r is a or g

<220>

<221> misc_feature

<222> (10)..(10)

<223> w is a or t

<220>

<221> misc_feature

<222> (12)..(12)

<223> y is c or t

<400> 11

actaattraw cyatgtacta aat 23

<210> 12

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (Bacillus subtilis, consensus)

<220>

<221> misc_feature

<222> (8)..(8)

<223> r is a or g

<220>

<221> misc_feature

<222> (10)..(10)

<223> w is a or t

<220>

<221> misc_feature

<222> (12)..(12)

<223> y is c or t

<400> 12

actaattraw cyatgtacta aattttca 28

<210> 13

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terVII)

<400> 13

gaactaatta aactatgtac taaattttca 30

<210> 14

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> ter sequence (terIX)

<400> 14

atactaattg atccatgtac taaattttca 30

<210> 15

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Sequence recognized by XerCD (consensus)

<220>

<221> misc_feature

<222> (7)..(7)

<223> y is c or t

<220>

<221> misc_feature

<222> (8)..(8)

<223> r is a or g

<220>

<221> misc_feature

<222> (9)..(9)

<223> y is c or t

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g or t

<220>

<221> misc_feature

<222> (23)..(23)

<223> k is g or t

<220>

<221> misc_feature

<222> (28)..(28)

<223> y is c or t

<400> 15

ggtgcgyrya annnnnntta tgktaaay

<210> 16

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Sequence recognized by XerCD (consensus, dif and cer)

<220>

<221> misc_feature

<222> (7)..(7)

<223> y is c or t

<220>

<221> misc_feature

<222> (9)..(9)

<223> y is c or t

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g or t

<220>

<221> misc_feature

<222> (23)..(23)

<223> k is g or t

<400> 16

ggtgcgyaya annnnnntta tgktaaat 28

<210> 17

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Sequence recognized by XerCD (consensus, dif and psi)

<220>

<221> misc_feature

<222> (9)..(9)

<223> y is c or t

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g, or t

<220>

<221> misc_feature

<222> (28)..(28)

<223> y is c or t

<400> 17

ggtgcgcrya annnnnntta tgttaaay 28

<210> 18

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Sequence recognized by XerCD (consensus, cer and psi)

<220>

<221> misc_feature

<222> (7)..(7)

<223> y is c or t

<220>

<221> misc_feature

<222> (8)..(8)

<223> r is a or g

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g, or t

<220>

<221> misc_feature

<222> (23)..(23)

<223> k is g or t

<220>

<221> misc_feature

<222> (28)..(28)

<223> y is c or t

<400> 18

ggtgcgyrca annnnnntta tgktaaay 28

<210> 19

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> dif sequence

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g, or t

<400> 19

ggtgcgcata annnnnntta tgttaaat 28

<210> 20

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> cer sequence

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g, or t

<400> 20

ggtgcgtaca annnnnntta tggtaaat 28

<210> 21

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> psi sequence

<220>

<221> misc_feature

<222> (12)..(17)

<223> n is a, c, g, or t

<400> 21

ggtgcgcgca annnnnntta tgttaaac 28

<210> 22

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> dif sequence

<400> 22

ggtgcgcata atgtatatta tgttaaat 28

<210> 23

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> cer sequence

<400> 23

ggtgcgtaca agggatgtta tggtaaat 28

<210> 24

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> psi sequence

<400> 24

ggtgcgcgca agatccatta tgttaaac 28

<210> 25

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Outside End (OE) sequence

<400> 25

ctgtctctta tacacatct 19

<210> 26

<211> 222

<212> DNA

<213> Artificial Sequence

<220>

<223> DNA fragment containing a pair of ter sequence

<220>

<221> misc_feature

<222> (24)..(199)

<220>

<221> misc_feature

<222> (24)..(199)

<223> n is a, c, g, or t

<400> 26

actttagtta caacatactt attnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180

nnnnnnnnnn nnnnnnnnna ataagtatgt tgtaactaaa gt 222

<210> 27

<211> 383

<212> DNA

<213> Artificial Sequence

<220>

<223> ori-ter cassette

<400> 27

agtatgttgt aactaaagat aacttcgtat aatgtatgct atacgaagtt atacagatcg 60

tgcgatctac tgtggataac tctgtcagga agcttggatc aaccggtagt tatccaaaga 120

acaactgttg ttcagttttt gagttgtgta taacccctca ttctgatccc agcttatacg 180

gtccaggatc accgatcatt cacagttaat gatcctttcc aggttgttga tcttaaaagc 240

cggatccttg ttatccacag ggcagtgcga tcctaataag agatcacaat agaacagatc 300

tctaaataaa tagatcttct ttttaatacc caggatccat ttaacataat atacattatg 360

cgcaccttta gttacaacat act 383

<210> 28

<211> 320

<212> DNA

<213> Artificial Sequence

<220>

<223> ori-dif cassette

<400> 28

atttaacata atatacatta tgcgcaccaa gtatacagat cgtgcgatct actgtggata 60

actctgtcag gaagcttgga tcaaccggta gttatccaaa gaacaactgt tgttcagttt 120

ttgagttgtg tataacccct cattctgatc ccagcttata cggtccagga tcaccgatca 180

ttcacagtta atgatccttt ccaggttgtt gatcttaaaa gccggatcct tgttatccac 240

agggcagtgc gatcctaata agagatcaca atagaacaga tctctaaata aatagatctt 300

ctttttaata cccaggatcc 320

<210> 29

<211> 399

<212> DNA

<213> Artificial Sequence

<220>

<223> oriC transposon DNA

<400> 29

ctgtctctta tacacatctg aagatccggc agaagaatgg ctgggatcgt gggttaattt 60

actcaaataa gtatacagat cgtgcgatct actgtggata actctgtcag gaagcttgga 120

tcaaccggta gttatccaaa gaacaactgt tgttcagttt ttgagttgtg tataacccct 180

cattctgatc ccagcttata cggtccagga tcaccgatca ttcacagtta atgatccttt 240

ccaggttgtt gatcttaaaa gccggatcct tgttatccac agggcagtgc gatcctaata 300

agagatcaca atagaacaga tctctaaata aatagatctt ctttttaata cccaggatcc 360

caggtctttc tcaagccgac agatgtgtat aagagacag 399

<210> 30

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> loxP consensus sequence

<400> 30

ataacttcgt atagcataca ttatacgaag ttat 34

<210> 31

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> lox 511 sequence

<400> 31

ataacttcgt atagtataca ttatacgaag ttat 34

<210> 32

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> lox2272 sequence

<400> 32

ataacttcgt ataggatact ttatacgaag ttat 34

<210> 33

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> loxFAS sequence

<400> 33

ataacttcgt atataccttt ctatacgaag ttat 34

<210> 34

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> lox RE sequence

<400> 34

ataacttcgt atagcataca ttatacgaac ggta 34

<210> 35

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> lox LE sequence

<400> 35

taccgttcgt atagcataca ttatacgaag ttat 34

<210> 36

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> FRT sequence

<400> 36

gaagttccta ttctctagaa agtataggaa cttc 34

<210> 37

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> rox sequence

<400> 37

taactttaaa taatgccaat tatttaaagt ta 32

<210> 38

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> SUE1156 primer

<400> 38

ctatgcggca tcagagcag 19

<210> 39

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> SUE1361 primer

<400> 39

gttaagccag ccccgacac 19

<210> 40

<211> 461

<212> DNA

<213> Artificial Sequence

<220>

<223> OLDT cassette

<400> 40

cgcgtcagcg ggtgttggcg ggtgtcgggg ctggcttaac agtatgttgt aactaaagat 60

aacttcgtat aatgtatgct atacgaagtt atacagatcg tgcgatctac tgtggataac 120

tctgtcagga agcttggatc aaccggtagt tatccaaaga acaactgttg ttcagttttt 180

gagttgtgta taacccctca ttctgatccc agcttatacg gtccaggatc accgatcatt 240

cacagttaat gatcctttcc aggttgttga tcttaaaagc cggatccttg ttatccacag 300

ggcagtgcga tcctaataag agatcacaat agaacagatc tctaaataaa tagatcttct 360

ttttaatacc caggatccat ttaacataat atacattatg cgcaccttta gttacaacat 420

actatgcggc atcagagcag attgtactga gagtgcacca t 461

<210> 41

<211> 378

<212> DNA

<213> Artificial Sequence

<220>

<223> OriC300 cassette

<400> 41

cgcgtcagcg ggtgttggcg ggtgtcgggg ctggcttaac agtatgttgt aactaaagat 60

ctactgtgga taactctgtc aggaagcttg gatcaaccgg tagttatcca aagaacaact 120

gttgttcagt ttttgagttg tgtataaccc ctcattctga tcccagctta tacggtccag 180

gatcaccgat cattcacagt taatgatcct ttccaggttg ttgatcttaa aagccggatc 240

cttgttatcc acagggcagt gcgatcctaa taagagatca caatagaaca gatctctaaa 300

taaatagatc ttctttttaa tactttagtt acaacatact atgcggcatc agagcagatt 360

gtactgagag tgcaccat 378