

pRibo-Tt

LOCUS Exported 8188 bp ds-DNA circular SYN 17-JUN-2019

DEFINITION synthetic circular DNA

ACCESSION .

VERSION .

KEYWORDS .

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 8188)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Monday, Jun 17, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..8188

/organism="synthetic DNA construct"

/mol_type="other DNA"

promoter 9..148

/locus_tag="pL"

/label=pL

-35_signal 107..112

/locus_tag="-35"

/label=-35

-10_signal 130..135

/locus_tag="-10"

/label=-10

precursor_RNA 181..319

/locus_tag="16S 5' precursor"

/label=16S 5' precursor

rRNA 320..1768

/locus_tag="16S rRNA (5)'"

/label=16S rRNA (5')

rRNA 1767..1781

/locus_tag="Linker 1"

/label=Linker 1

rRNA 1782..4685

/locus_tag="cp23S"

/label=cp23S

rRNA 1826..1829

/locus_tag="cp linker (GAGA)"

/label=cp linker (GAGA)

misc_feature 3887

/locus_tag="A2058G, Ery resistance"

/label=A2058G, Ery resistance

rRNA 4686..4695

/locus_tag="Linker 2"

/label=Linker 2

rRNA 4696..4784

/locus_tag="16S rRNA (3)'"

/label=16S rRNA (3')

RBS 4776..4784

/label=Shine-Dalgarno sequence

/note="full consensus sequence for ribosome-binding sites
upstream of start codons in E. coli; complementary to a

region in the 3' end of the 16S rRNA (Chen et al., 1994)"

precursor_RNA 4785..4841
/locus_tag="16S 3' precursor"
/label=16S 3' precursor

tRNA 4956..5031
/locus_tag="Glu-tRNA"
/label=Glu-tRNA

rRNA 5328..5446
/locus_tag="5S rRNA"
/label=5S rRNA

terminator 5447..5533
/gene="Escherichia coli rrnB"
/label=rrnB T1 terminator
/note="transcription terminator T1 from the E. coli rrnB gene"

terminator 5625..5652
/label=rrnB T2 terminator
/note="transcription terminator T2 from the E. coli rrnB gene"

promoter 5735..5763
/label=tac promoter
/note="strong E. coli promoter; hybrid between the trp and lac UV5 promoters"

tRNA 5837..5913
/locus_tag="tRNA Asp"
/label=tRNA Asp

tRNA 5922..5997
/locus_tag="tRNA Trp"
/label=tRNA Trp

tRNA 6036..6112
/locus_tag="tRNA Ile"
/label=tRNA Ile

tRNA 6155..6230
/locus_tag="tRNA Ala"
/label=tRNA Ala

tRNA 6269..6344
/locus_tag="tRNA Glu"
/label=tRNA Glu

terminator 6361..6403
/locus_tag="T1"
/label=T1

promoter 6420..6524
/gene="bla"
/label=AmpR promoter

CDS 6525..7385
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/gene="bla"
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/label=AmpR
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EPELNEAIPNDERDTTTPAAMATTLRKLLTGELLTLASRQQLIDWMEADKVAGPLLRS
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/note="high-copy-number ColE1/pMB1/pBR322/pUC origin of
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ORIGIN

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121 ACTGGCGGTG ATACTGAGCA CGGGTACCGG CCGCTGAGAA AAAGCGAAGC GGCCTGCTC
181 TTTAACAATT TATCAGACAA TCTGTGTGGG CACTCGAAGA TACGGATTCT TAACGTCGCA
241 AGACGAAAAA TGAATACCAA GTCTCAAGAG TGAACACGTA ATTCATTACG AAGTTTAATT
301 CTTTGAGCGT CAAACTTTTA AATTGAAGAG TTTGATCATG GCTCAGATTG AACGCTGGCG
361 GCAGGCCTAA CACATGCAAG TCGAACGGTA ACAGGAAGAA GCTTGCTTCT TTGCTGACGA
421 GTGGCGGACG GGTGAGTAAT GTCTGGGAAA CTGCCTGATG GAGGGGGATA ACTACTGGAA
481 ACGGTAGCTA ATACCGCATA ACGTCGCAAG ACCAAAGAGG GGGACCTTCG GGCCTCTTGC
541 CATCGGATGT GCCCAGATGG GATTAGCTAG TAGGTGGGGT AACGGCTCAC CTAGGCGACG
601 ATCCCTAGCT GGTCTGAGAG GATGACCAGC CACACTGGAA CTGAGACACG GTCCAGACTC
661 CTACGGGAGG CAGCAGTGGG GAATATTGCA CAATGGGCGC AAGCCTGATG CAGCCATGCC
721 GCGTGTATGA AGAAGGCCTT CGGGTGTGTA AGTACTTTCA GCGGGGAGGA AGGGAGTAAA
781 GTTAATACCT TTGCTCATTG ACGTTACCCG CAGAAGAAGC ACCGGCTAAC TCCGTGCCAG
841 CAGCCGCGGT AATACGGAGG GTGCAAGCGT TAATCGGAAT TACTGGGCGT AAAGCGCACG
901 CAGGCGGTTT GTTAAGTCAG ATGTGAAATC CCCGGGCTCA ACCTGGGAAC TGCATCTGAT
961 ACTGGCAAGC TTGAGTCTCG TAGAGGGGGG TAGAATTCCA GGTGTAGCGG TGAAATGCGT
1021 AGAGATCTGG AGGAATACCG GTGGCGAAGG CGGCCCCCTG GACGAAGACT GACGCTCAGG
1081 TGCGAAAGCG TGGGGAGCAA ACAGGATTAG ATACCCTGGT AGTCCACGCC GTAAACGATG
1141 TCGACTTGGA GGTGTGCCCC TTGAGGCGTG GCTTCCGGAG CTAACGACCG AGTCGACCG
1201 CTGGGGGAGT ACGGCCGCAA GGTAAAAACT CAAATGAATT GACGGGGGCC CACACAAGCG
1261 GTGGAGCATG TGGTTTAATT CGATGCAACG CGAAGAACCT TACCTGGTCT TGACATCCAC
1321 GGAAGTTTTT AGAGATGAGA ATGTGCCTTC GGGAACCGTG AGACAGGTGC TGCTAGGCTG
1381 TCGTCAGCTC GTGTTGTGAA ATGTTGGGTT AAGTCCCGCA ACGAGCGCAA CCCTTATCCT
1441 TTGTTGCCAG CGGTCCGGCC GGGAACTCAA AGGAGACTGC CAGTGATAAA CTGGAGGAAG
1501 GTGGGGATGA CGTCAAGTCA TCATGGCCCT TACGACCAGG GCTACACACG TGCTACAATG
1561 GCGCATACAA AGAGAAGCGA CCTCGCGAGA GCAAGCGGAC CTCATAAAGT GCGTCGTAGT
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1681 AATGCCACGG TGAATACGTT CCCGGGCCTT GTACACACCG CCCGTCACAC CATGGGAGTG
1741 GGTGCAAAAA GAAGTAGGTA GCTTAACCCA ATGAACAATT GGATGCGTTG AGCTAACCGG
1801 TACTAATGAA CCGTGAGGCT TAACCGAGAG GTTAAGCGAC TAAGCGTACA CCGTGGATGC
1861 CCTGGCAGTC AGAGGCGATG AAGGACGTGC TAATCTGCGA TAAGCGTCGG TAAGGTGATA
1921 TGAACCGTTA TAACCGGCGA TTTCCGAATG GGGAAACCCA GTGTGTTTCG ACACACTATC
1981 ATTAAGTGAA TCCATAGGTT AATGAGGCGA ACCGGGGGAA CTGAAACATC TAAGTACCCC
2041 GAGGAAAAAG AATCAACCGA GATTCCCCCA GTAGCGGCGA GCGAACGGGG AGCAGCCCAG
2101 AGCCTGAATC AGTGTGTGTG TTAGTGGAAG CGTCTGGAAA GCGCGCGCAT ACAGGGTGAC
2161 AGCCCCGTAC AAAAAAATGC ACATGCTGTG AGCTCGATGA GTAGGGCGGG ACACGTGGTA
2221 TCCTGTCTGA ATATGGGGGG ACCATCCTCC AAGGCTAAAT ACTCCTGACT GACCGATAGT
2281 GAACCAGTAC CGTGAGGGAA AGGCGAAAAG AACCCCGGCG AGGGGAGTGA AAAAGAACCT
2341 GAAACCGTGT ACGTACAAGC AGTGGGAGCA CGCTTAGGCG TGTGACTGCG TACCTTTTGT
2401 ATAATGGGTC AGCGACTTAT ATTCTGTAGC AAGGTTAACC GAATAGGGGA GCCGAAGGGA
2461 AACCGAGTCT TAACTGGGCG TTAAGTTGCA GGGTATAGAC CCGAAACCCG GTGATCTAGC
2521 CATGGGCAGG TTGAAGGTTG GGTAACACTA ACTGGAGGAC CGAACCGACT AATGTTGAAA
2581 AATTAGCGGA TGACTTGTGG CTGGGGGTGA AAGGCCAATC AAACCGGGAG ATAGCTGGTT
2641 CTCCCCGAAA GCTATTTAGG TAGCGCCTCG TGAATTCATC TCCGGGGGTA GAGCACTGTT
2701 TCGGCAAGGG GGTCATCCCG ACTTACCAAC CCGATGCAAA CTGCGAATAC CGGAGAATGT
2761 TATCACGGGA GACACACGGC GGGTGCTAAC GTCCGTCGTG AAGAGGGAAA CAACCCAGAC
2821 CGCCAGCTAA GGTCCCAAAG TCATGGTTAA GTGGGAAACG ATGTGGGAAG GCCCAGACAG
2881 CCAGGATGTT GGCTTAGAAG CAGCCATCAT TTAAAGAAAG CGTAATAGCT CACTGGTCGA
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3001	CTTATGCGTT	GTTGGGTAGG	GGAGCGTTCT	GTAAGCCTGC	GAAGGTGTGC	TGTGAGGCAT
3061	GCTGGAGGTA	TCAGAAGTGC	GAATGCTGAC	ATAAGTAACG	ATAAAGCGGG	TGAAAAGCCC
3121	GCTCGCCGGA	AGACCAAGGG	TTCCTGTCCA	ACGTTAATCG	GGGCAGGGTG	AGTCGACCCC
3181	TAAGGCGAGG	CCGAAAGGCG	TAGTCGATGG	GAAACAGGTT	AATATTCCCTG	TACTTGGTGT
3241	TACTGCGAAG	GGGGGACGGA	GAAGGCTATG	TTGGCCGGGC	GACGGTTGTC	CCGGTTTAAG
3301	CGTGTAGGCT	GGTTTTCCAG	GCAAATCCGG	AAAATCAAGG	CTGAGGCGTG	ATGACGAGGC
3361	ACTACGGTGC	TGAAGCAACA	AATGCCCTGC	TTCCAGGAAA	AGCCTCTAAG	CATCAGGTAA
3421	CATCAAATCG	TACCCCAAAC	CGACACAGGT	GGTCAGGTAG	AGAATACCAA	GGCGCTTGAG
3481	AGAACTCGGG	TGAAGGAAC	AGGCAAAATG	GTGCCGTAA	TTCCGGAGAA	GGCACGCTGA
3541	TATGTAGTGT	AGGTCCCTCG	CGGATGGAGC	TGAAATCAGT	CGAAGATACC	AGCTGGCTGC
3601	AACGTTTTAT	TAAAAACACA	GCACGTGTGA	AACACGAAAG	TGGACGTATA	CGGTGTGACG
3661	CCTGCCCGGT	GCCGGAAGGT	TAATTGATGG	GGTTAGCGCA	AGCGAAGCTC	TTGATCGAAG
3721	CCCCGGTAAA	CGGCGGCCGT	AACATAACG	GTCCTAAGGT	AGCGAAATTC	CTTGTCGGGT
3781	AAGTTCCGAC	CTGCACGAAT	GGCGTAATGA	TGGCCAGGCT	GTCTCCACCC	GAGACTCAGT
3841	GAAATTGAAC	TCGCTGTGAA	GATGCAGTGT	ACCCGCGGCA	AGACGGGAAG	ACCCCGTGAA
3901	CCTTTACTAT	AGCTTGACAC	TGAACATTGA	GCCTTGATGT	GTAGGATAGG	TGGGAGGCTT
3961	TGAAGTGTGG	ACGCCAGTCT	GCATGGAGCC	GACCTTGAAA	TACCACCCTT	TAATGTTTGA
4021	TGTTCTAACG	TTGACCCGTA	ATCCGGGTTG	CGGACAGTGT	CTGGTGGGTA	GTTTGAAGTG
4081	GGCGGTCTCC	TCCTAAAGAG	TAACGGAGGA	GCACGAAGGT	TGGCTAATCC	TGGTCGGACA
4141	TCAGGAGGTT	AGTGCAATGG	CATAAGCCAG	CTTGACTGCG	AGCGTGACGG	CGCGAGCAGG
4201	TGCGAAAGCA	GGTCATAGTG	ATCCGGTGGT	TCTGAATGGA	AGGGCCATCG	CTCAACGGAT
4261	AAAAGGTACT	CCGGGGATAA	CAGGCTGATA	CCGCCCAAGA	GTTTCATATCG	ACGGCGGTGT
4321	TTGGCACCTC	GATGTCGGCT	CATCACATCC	TGGGGCTGAA	GTAGGTCCCA	AGGGTATGGC
4381	TGTTGCGCAT	TTAAAGTGGT	ACGCGAGCTG	GGTTTAGAAC	GTCGTGAGAC	AGTTCGGTCC
4441	CTATCTGCCG	TGGGCGCTGG	AGAACTGAGG	GGGGCTGCTC	CTAGTACGAG	AGGACCGGAG
4501	TGGACGCATC	ACTGGTGTTC	GGGTTGTCAT	GCCAATGGCA	CTGCCCAGTA	GCTAAATGCG
4561	GAAGAGATAA	GTGCTGAAAG	CATCTAAGCA	CGAAACTTGC	CCCAGATGA	GTTCTCCCTG
4621	ACCCTTTAAG	GGTCCTGAAG	GAACGTTGAA	GACGACGACG	TTGATAGGCC	GGGTGTGTAA
4681	GCGCAGATAA	CTAGTGGAGG	CGCGTTACCA	CTTTGTGATT	CATGACTGGG	GTAAGTTCGT
4741	AACAAGGTAA	CCGTAGGGGA	ACCTGCGGTT	GGATCACCTC	CTTACCTTAA	AGAAGCGTAC
4801	TTTGTAGTGC	TCACACAGAT	TGTCTGATAG	AAAGTGAAAA	GCAAGGCGTT	TACGCGTTGG
4861	GAGTGAGGCT	GAAGAGAATA	AGGCCGTTCT	CTTTCTATTA	ATGAAAGCTC	ACCTACACG
4921	AAAATATCAC	GCAACGCGTG	ATAAGCAATT	TTCTGTGTCC	CTTCGTCTAG	AGGCCAGGA
4981	CACCGCCCTT	TCACGGCGGT	AACAGGGGTT	CGAATCCCTT	AGGGGACGCC	ACTTGCTGGT
5041	TTGTGAGTGA	AAGTCGCCGA	CCTTAATATC	TCAAACTCA	TCTTCGGGTG	ATGTTTGAGA
5101	TATTTGCTCT	TTAAAAATCT	GGATCAAGCT	GAAAATTGAA	AACTGAACA	ACGAGAGTTG
5161	TTCGTGAGTC	TCTCAAATTT	TCGCAACACG	ATGATGAATC	GAAAGAAACA	TCTTCGGGTT
5221	GTGAGCTTAA	GCTTACAACG	CCGAAGCTGT	TTTGGCGGAT	GAGAGAAGAT	TTTCAGCCTG
5281	ATACAGATTA	AATCAGAACG	CAGAAGCGGT	CTGATAAAAC	AGAAATTTGCC	TGGCGGCAGT
5341	AGCGCGGTGG	TCCCACCTGA	CCCCATGCCG	AACTCAGAAG	TGAAACGCCG	TAGCGCCGAT
5401	GGTAGTGTGG	GGTCTCCCCA	TGCGAGAGTA	GGGAACAGCC	AGGCATCAAA	TAAAACGAAA
5461	GGCTCAGTCG	AAAGACTGGG	CCTTTCGTTT	TATCTGTTGT	TTGTCGGTGA	ACGCTCTCCT
5521	GAGTAGGACA	AATCCGCCGG	GAGCGGATTT	GAACGTTGCG	AAGCAACGGC	CCGGAGGGTG
5581	GCGGGCAGGA	CGCCCGCCAT	AACTGCCAG	GCATCAAATT	AAGCAGAAGG	CCATCCTGAC
5641	GGATGGCCTT	TTTGCGTTTC	TACAAACTCT	TCCTGTCGTC	ATATCTACAA	GCCGGCTTTC
5701	CTTTCCATCA	AAAAAATATT	GATGAAATGA	GCTGTTGACA	ATTAATCATC	GGCTCGTATA
5761	ATGTGTGGAA	TTGTACACAA	GGAAACAGAA	TTCCCGGGGA	TCTGGGGGAT	CATCGATGGT
5821	TGTAAGAGAA	TTGCGTGGAG	CGGTAGTTCA	GTGCGTTAGA	ATACCTGCCT	GTCACGCAGG
5881	GGGTGCGGGG	TTGAGTCCC	GTCCGTTCCG	CCACCCATAA	TAGGGGCGTA	GTTCAATTGG
5941	TAGAGCACCG	GTCTCCAAAA	CCGGGTGTTG	GGAGTTCGAG	TCTCTCCGCC	CCTGCCAGAA
6001	ATCATCCTTG	TCGATGGGAG	CAGTAAACCC	TCTACAGGCT	TGTAGCTCAG	GTGGTTAGAG
6061	CGCACCCCTG	ATAAGGTGTA	GGTCGGTGGT	TCAAGTCCAC	TCAGGCCTAC	CAAAATTTGCA
6121	CGGCAAATTT	GAAGAGGTTT	TAACATACATG	TTATGGGGCT	ATAGCTCAGC	TGGGAGAGCG
6181	CCTGCTTTTG	ACGCAGGAGG	TCTGCGGTTT	GATCCCGCAT	AGCTCCACCA	TCTCTGTAGT
6241	GATTAAGAGC	GTGATAAGCA	ATTTTCGTGT	CCCCTTCGTC	TAGAGGCCCA	GGACACCGCC
6301	CTTTCACGGC	GGTAACAGGG	GTTTCAATCC	CCTAGGGGAC	GCCACTCTAG	GAAATCCGCC

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6361 ATAAACAAA AGGCTCAGTC GGAAGACTGG GCCTTTTGT TACGCGCCG GGAAATGTGC
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6481 AATAACCCTG ATAAATGCTT CAATAATATT GAAAAAGGAA GAGTATGAGT ATTCAACATT
6541 TCCGTGTCGC CCTTATTCCC TTTTTTGCGG CATTTCGCCT TCCTGTTTTT GTCACCCAG
6601 AAACGCTGGT GAAAGTAAAA GATGCTGAAG ATCAGTTGGG TGCACGAGTG GGTACATCG
6661 AACTGGATCT CAACAGCGGT AAGATCCTTG AGAGTTTTTCG CCCCAGAGAA CGTTTTCCAA
6721 TGATGAGCAC TTTTAAAGTT CTGCTATGTG GCGCGGTATT ATCCCGTGTT GACGCCGGGC
6781 AAGAGCAACT CGGTCGCCGC ATACACTATT CTCAGAATGA CTTGGTTGAG TACTACCAG
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6901 CCATGAGTGA TAACACTGCG GCCAACTTAC TTCTGACAAC GATCGGAGGA CCGAAGGAGC
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7021 AGCTGAATGA AGCCATACCA AACGACGAGC GTGACACCAC GATGCCTGCA GCAATGGCAA
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7321 CAACTATGGA TGAACGAAAT AGACAGATCG CTGAGATAGG TGCCTCACTG ATTAAGCATT
7381 GGTAACGCA GACCAAGTTT ACTCATATAT ACTTTAGATT GATTTAAAAA TTCATTTTTA
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7681 AGCGCAGATA CCAAATACTG TCCTTCTAGT GTAGCCGTAG TTAGGCCACC ACTTCAAGAA
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7861 GCGGTCGGGC TGAACGGGGG GTTCGTGCAC ACAGCCCAGC TTGGAGCGAA CGACCTACAC
7921 CGAACTGAGA TACCTACAGC GTGAGCTATG AGAAAGCGCC ACGCTTCCCG AAGGGAGAAA
7981 GGCGGACAGG TATCCGGTAA GCGGCAGGGT CGGAACAGGA GAGCGCACGA GGGAGCTTCC
8041 AGGGGAAAC GCCTGGTATC TTTATAGTCC TGTGCGGTTT CGCCACCTCT GACTTGAGCG
8101 TCGATTTTTG TGATGCTCGT CAGGGGGGCG GAGCCTATGG AAAAAAGCCA GCAACGCGGC
8161 CTTTTTACGG TTCCTGGCCT TTTGCTGG
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poRbs

LOCUS Exported 9029 bp ds-DNA circular SYN 17-JUN-2019

DEFINITION synthetic circular DNA

ACCESSION .

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KEYWORDS .

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 9029)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Monday, Jun 17, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..9029

/organism="synthetic DNA construct"

/mol_type="other DNA"

promoter 9..148

/locus_tag="PL"

/label=PL

-35_signal 107..112

/locus_tag="-35"

/label=-35

-10_signal 130..135

/locus_tag="-10"

/label=-10

precursor_RNA 181..319

/locus_tag="16S rRNA precursor"

/label=16S rRNA precursor

rRNA 320..1861

/locus_tag="16S rRNA"

/label=16S rRNA

RBS 1853..1861

/label=Shine-Dalgarno sequence

/note="full consensus sequence for ribosome-binding sites upstream of start codons in E. coli; complementary to a region in the 3' end of the 16S rRNA (Chen et al., 1994)"

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/label=Glu tRNA

rRNA 2302..5205

/locus_tag="23S rRNA"

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rRNA 5299..5417

/locus_tag="5S rRNA"

/label=5S rRNA

terminator 5418..5504

/gene="Escherichia coli rrnB"

/label=rrnB T1 terminator

/note="transcription terminator T1 from the E. coli rrnB gene"

terminator 5596..5623

/label=rrnB T2 terminator

/note="transcription terminator T2 from the E. coli rrnB"

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CDS 6102..6896
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/product="aminoglycoside phosphotransferase from Tn5"
/label=NeoR/KanR
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(Geneticin(R))"
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GLAPAEFLFARLKARMPDGEDLVVTHGDACLPNIMVENGRFSGFIDCGRLGVADRYQDIA
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61 AAACATACAG ATAACCATCT GCGGTGATAA ATTATCTCTG GCGGTGTTGA CATAAATACC
121 ACTGGCGGTG ATACTGAGCA CGGGTACCGG CCGCTGAGAA AAAGCGAAGC GGCCTGCTC
181 TTTAACAATT TATCAGACAA TCTGTGTGGG CACTCGAAGA TACGATTCT TAACGTCGCA
241 AGACGAAAAA TGAATACCAA GTCTCAAGAG TGAACACGTA ATTCATTACG AAGTTTAATT
301 CTTTGAGCGT CAAACTTTTA AATTGAAGAG TTTGATCATG GCTCAGATTG AACGCTGGCG
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421 GTGGCGGACG GGTGAGTAAT GTCTGGGAAA CTGCCTGATG GAGGGGGATA ACTACTGGAA
481 ACGGTAGCTA ATACCGCATA ACGTCGCAAG ACCAAAGAGG GGGACCTTCG GGCCTCTTGC
541 CATCGGATGT GCCCAGATGG GATTAGCTAG TAGGTGGGGT AACGGCTCAC CTAGGCGACG
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661 CTACGGGAGG CAGCAGTGGG GAATATTGCA CAATGGGCGC AAGCCTGATG CAGCCATGCC
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781 GTTAATACCT TTGCTCATTG ACGTTACCCG CAGAAGAAGC ACCGGCTAAC TCCGTGCCAG
841 CAGCCGCGGT AATACGGAGG GTGCAAGCGT TAATCGGAAT TACTGGGCGT AAAGCGCACG
901 CAGGCGGTTT GTTAAGTCAG ATGTGAAATC CCCGGGCTCA ACCTGGGAAC TGCATCTGAT
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1021 AGAGATCTGG AGGAATACCG GTGGCGAAGG CGGCCCCCTG GACGAAGACT GACGCTCAGG
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1201 CCTGGGGAGT ACGGCCGCAA GGTAAAACT CAAATGAATT GACGGGGGCC CGCACAAGCG
1261 GTGGAGCATG TGGTTTAATT CGATGCAACG CGAAGAACCT TACCTGGTCT TGACATCCAC
1321 GGAAGTTTTC AGAGATGAGA ATGTGCCTTC GGGAACCGTG AGACAGGTGC TGCATGGCTG
1381 TCGTCAGCTC GTGTTGTGAA ATGTTGGGTT AAGTCCCGCA ACGAGCGCAA CCCTTATCCT
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poGFP2

LOCUS Exported 6771 bp ds-DNA circular SYN 17-JUN-2019

DEFINITION synthetic circular DNA.

ACCESSION .

VERSION .

KEYWORDS .

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 6771)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Monday, Jun 17, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..6771

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poLuc2

LOCUS Exported 7701 bp ds-DNA circular SYN 17-JUN-2019

DEFINITION synthetic circular DNA.

ACCESSION .

VERSION .

KEYWORDS .

SOURCE synthetic DNA construct

 ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 7701)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

 JOURNAL Exported Monday, Jun 17, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

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7381 TTATCTTGGA CAAGAAGAAG ATCGCTTGGC CTCGCGCGCA GATCAGTTGG AAGAATTTGT
7441 CCACTACGTG AAAGGCGAGA TCACCAAGGT AGTCGGCAA TAATGTCTAA CAATTCGTTT
7501 AAGCCGACGC CGCTTCGCGG CGCGGCTTAA CTCAAGCGTT AGATGCACTA AGCACATAAT
7561 TGCTCACAGC CAACTATCA GGTCAAGTCT GCTTTTATTA TTTTAAAGCG TGCATAATAA
7621 GCCCTACACA AATTGGGAGA TATATCATGA AAGGCTGGCT TTTTCTTGTT ATCGCAATAG
7681 TTGGCGAAGT AATCGCAACA T
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poRFP-oGFP

LOCUS Exported 5659 bp ds-DNA circular SYN 18-JUN-2019

DEFINITION synthetic circular DNA

ACCESSION .

VERSION .

KEYWORDS .

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 5659)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Tuesday, Jun 18, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..5659

/organism="synthetic DNA construct"

/mol_type="other DNA"

promoter 66..110

/locus_tag="Plpp5"

/label=Plpp5

protein_bind 111..135

/label=lac operator

/bound_moiety="lac repressor encoded by lacI"

/note="The lac repressor binds to the lac operator to inhibit transcription in *E. coli*. This inhibition can be relieved by adding lactose or isopropyl-beta-D-thiogalactopyranoside (IPTG)."

RBS 153..159

/locus_tag="oRBS(1)"

/label=oRBS

/label=oRBS(1)

CDS 166..888

/locus_tag="oGFP"

/label=oGFP

terminator 1128..1214

/gene="Escherichia coli rrnB"

/label=rrnB T1 terminator

/note="transcription terminator T1 from the *E. coli* rrnB gene"

terminator 1306..1333

/label=rrnB T2 terminator

/note="transcription terminator T2 from the *E. coli* rrnB gene"

rep_origin 1919..2464

/direction=RIGHT

/label=p15A ori

/note="Plasmids containing the medium-copy-number p15A origin of replication can be propagated in *E. coli* cells that contain a second plasmid with the ColE1 origin."

promoter 3074..3118

/label=T5 promoter

/note="bacteriophage T5 promoter for *E. coli* RNA polymerase, with embedded lac operator"

-35_signal 3089..3093

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/locus_tag="-35 signal"
/label=-35 signal
protein_bind 3094..3110
/label=lac operator
/bound_moiety="lac repressor encoded by lacI"
/note="The lac repressor binds to the lac operator to
inhibit transcription in E. coli. This inhibition can be
relieved by adding lactose or
isopropyl-beta-D-thiogalactopyranoside (IPTG)."
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/label=-10 signal
protein_bind 3126..3142
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/bound_moiety="lac repressor encoded by lacI"
/note="The lac repressor binds to the lac operator to
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relieved by adding lactose or
isopropyl-beta-D-thiogalactopyranoside (IPTG)."
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/locus_tag="oRBS"
/label=oRBS
CDS 3180..3857
/codon_start=1
/product="monomeric derivative of DsRed (Campbell et al.,
2002)"
/label=mRFP1
/translation="MASSEDVIKEFMRFKVRMEGSVNGHEFEIEGEGEGRPYEGTQTAK
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VTVTQDSSLQDGEFIYKVKLRGTNFPDGPVMQKKTMGWEASTERMYPEDGALKGEIKM
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TGA"
terminator 3921..4015
/label=lambda t0 terminator
/note="transcription terminator from phage lambda"
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1985)"
/label=SmR
/note="confers resistance to spectinomycin and
streptomycin"
/translation="MREAVIAEVSTQLSEVVGVIERHLEPTLLAVHLYGSAVDGGLKPH
SDIDLLVTVTVRLDETTRRALINDLLETSASPGESEILRAVEVTIVVHDDIIPWRYPK
RELQFGIEWQRNDILAGIFEPATIDIDLAILLTKAREHSVALVGPAAEELFDPVPEQDLF
EALNETLTLWNSPPDWAGDERNVVLTLSRIWYSAVTGKIAPKDVAADWAMERLPAQYQP
VILEARQAYLQGEEDRLASRADQLEEFVHYVKGEITKVVGK"
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1 CCGCATTAAT ATCTAGCGAG GATCCGAGGC GCGCCCAGAG ATTTTGAGAC ACAACGTGGC
61 TTTCCATCAA AAAAATATTG ACAACATAAA AAAC TTTGTG TTATACTTGT GGAATTGTGA
121 GCGGATAACA ATTCTATATC TGTTATTTTT TCCAACCACA GATCTATGAG CAAAGGTGAA
181 GAACTGTTTA CCGGCGTTGT GCCGATTCTG GTGGAAGTGG ATGGCGATGT GAACGGTCAC
241 AAATTCAGCG TCGTGTTGTA AGGTGAAGGC GATGCCACGA TTGGCAAAC GACGCTGAAA
301 TTTATCTGCA CCACCGGCAA ACTGCCGGTG CCGTGGCCGA CGCTGGTGAC CACCCTGACC
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361 TATGGCGTTC AGTGTTTTAG TCGCTATCCG GATCACATGA AACGTCACGA TTTCTTTAAA
421 TCTGCAATGC CGGAAGGCTA TGTGCAGGAA CGTACGATTA GCTTTAAAGA TGATGGCAAA
481 TATAAACGCG GCGCCGTTGT GAAATTTGAA GGCGATACCC TGGTGAACCG CATTGAACTG
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601 AATAGCCATA ATGTTTATAT TACGGCGGAT AAACAGAAAA ATGGCATCAA AGCGAATTTT
661 ACCGTTTCGCC ATAACGTTGA AGATGGCAGT GTGCAGCTGG CAGATCATTA TCAGCAGAAT
721 ACCCCGATTG GTGATGGTCC GGTGCTGCTG CCGGATAATC ATTATCTGAG CACGCAGACC
781 GTTCTGTCTA AAGATCCGAA CGAAAAAGGC ACGCGGGACC ACATGGTTCT GCACGAATAT
841 GTGAATGCGG CAGGTATTAC GTGGAGCCAT CCGCAGTTCTG AAAAATAAGT CGACCGGCTG
901 CTAACAAAGC CCGCGGCCGC TGAAGATCGA TCTCGACGAG TGAGAGAAGA TTTTCAGCCT
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1021 TAGCGCGGTG GTCCCACCTG ACCCCATGCC GAACTCAGAA GTGAAACGCC GTAGCGCCGA
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1261 GCGGGGACAG ACGCCCGCCA TAAACTGCCA GGCATCAAAT TAAGCAGAAG GCCATCCTGA
1321 CGGATGGCCT TTTTGCGTTT CTACACTCGA GGATCTCTTT CCTTTCCATC AAAAAATAT
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1741 CTGACTGCGT TAGCAATTTA ACTGTGATAA ACTACCGCAT TAAAGCTTAT CGATGATAAG
1801 CTGTCAAAAC TGAGAATTAC AACTTATATC GTATGGGGCT GACTTCAGGT GCTACATTTG
1861 AAGAGATAAA TTGCACTGAA ATCTAGAAAT ATTTTATCTG ATTAATAAGA TGATCTTCTT
1921 GAGATCGTTT TGGTCTGCGC GTAATCTCTT GCTCTGAAAA CGAAAAAAC GCCTTGCAGG
1981 GCGGTTTTTC GAAGGTTCTC TGAGCTACCA ACTCTTTGAA CCGAGGTAAC TGGCTTGGAG
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2101 CTAACCTCCT TAAATCAATT ACCATGGCT CTTGCCAGTG GTGCTTTTGC ATGTCTTTCC
2161 GGGTTGGACT CAAGACGATA GTTACCGGAT AAGGCGCAGC GGTGCGACTG AACGGGGGGT
2221 TCGTGCATAC AGTCCAGCTT GGAGCGAACT GCCTACCCGG AACTGAGTGT CAGGCGTGGA
2281 ATGAGACAAA CGCGGCCATA ACAGCGGAAT GACACCGGTA AACCGAAAGG CAGGAACAGG
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2401 TCGCCACCAC TGATTTGAGC GTCAGATTTT GTGATGCTTG TCAGGGGGGC GGAGCCTATG
2461 GAAAAACGGC TTTGCCGCGG CCCTCTCACT TCCCTGTTAA GTATCTTCCT GGCATCTTCC
2521 AGGAAATCTC CGCCCCGTTT GTAAGCCATT TCCGCTCGCC GCAGTCGAAC GACCGAGCGT
2581 AGCGAGTCAG TGAGCGAGGA AGCGGAATAT ATCCTGTATC ACATATTCTG CTGACGCACC
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2701 CATAGTAAGC CAGTATACAC TCCGCTAGCG CTGATGTCCG GCGGTGCTTT TGCCGTTACG
2761 CACCACCCCG TCAGTAGCTG AACAGGAGGG ACAGAGCTTT ATGCTTGTA ACCGTTTTGT
2821 GAAAAAATTT TTAATAATAA AAAGGGGACC TCTAGGGTCC CCAATTAATT AGTAATATAA
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2941 GGTGCCAAGC TCTCGGGTAA CATCAAGGCC CGATCCTTGG AGCCCTTGCC CTCCCGCACG
3001 ATGATCGTGC CGTGATCGAA AATCCAGATC CTTGACCCGC ATTTGCAAAC CCTCACTGAT
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3121 TTCAATTGTG AGCGGATAAC AATTTACAC AGAATTCATT AAAGCAACCA CAATTAACCTA
3181 TGGCTTCCCT CGAAGACGTT ATCAAAGAGT TCATGCGTTT CAAAGTTCTG ATGGAAGGTT
3241 CCGTTAACGG TCACGAGTTC GAAATCGAAG GTGAAGGTGA AGGTGCTCCG TACGAAGGTA
3301 CCCAGACCGC TAAACTGAAA GTTACCAAAG GTGGTCCGCT GCCGTTGCTG TGGGACATCC
3361 TGTCCCCGCA GTTCCAGTAC GGTTCCAAAG CTTACGTTAA ACACCCGGCT GACATCCCGG
3421 ACTACCTGAA ACTGTCTTTC CCGGAAGGTT TCAAATGGGA ACGTGTTATG AACTTCGAAG
3481 ACGGTGGTGT TGTTACCGTT ACCCAGGACT CCTCCCTGCA AGACGGTGAG TTCATCTACA
3541 AAGTTAAACT GCGTGGTACC AACTTCCCGT CCGACGGTCC GGTTATGCAG AAAAAACCA
3601 TGGGTGGA AGCTTCCACC GAACGTATGT ACCCGGAAGA CGGTGCTCTG AAAGGTGAAA
3661 TCAAAATGCG TCTGAAACTG AAAGACGGTG GTCACACGTA CGCTGAAGTT AAAACCACCT
3721 ACATGGCTAA AAAACCGGTT CAGCTGCCGG GTGCTTACAA AACCGACATC AAAGTGGACA
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3781 TCACCTCCCA CAACGAAGAC TACACCATCG TTGAACAGTA CGAACGTGCT GAAGGTCGTC
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3901 AGCTTAATTA GCTGAGCTTG GACTCCTGTT GATAGATCCA GTAATGACCT CAGAACTCCA
3961 TCTGGATTTG TTCAGAACGC TCGGTTGCCG CCGGGCGTTT TTTATTGGTG AGAATCCAAG
4021 CTAGCTTGGC GAGATTTTCA GGAGCTAAGG AAGCTAAAGA TCCGACATAT GCCGTTCCAT
4081 ACAGAAGCTG GGCGAACAAA CGATGCTCGC CTTCAGAAA ACCGAGGATG CGAACCCTT
4141 CATCCGGGGT CAGCACCACC GGCAAGCGCC GCGACGGCCG AGGTCTTCCG ATCTCCTGAA
4201 GCCAGGGCAG ATCCGTGCAC AGCACCTTGC CGTAGAAGAA CAGCAAGGCC GCCAATGCCT
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4861 TGGAACTTC GGCTTCCCCT GGAGAGAGCG AGATTCTCCG CGCTGTAGAA GTCACCATTG
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5581 CCTACACAAA TTGGGAGATA TATCATGAAA GGCTGGCTTT TTCTTGTTAT CGCAATAGTT
5641 GGCGAAGTAA TCGCAACAT
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GFP-TnaC template for *in vitro* translation

LOCUS Exported 1020 bp ds-DNA linear UNA 19-JUN-2019

DEFINITION natural linear DNA

ACCESSION .

VERSION .

KEYWORDS .

SOURCE natural DNA sequence

ORGANISM unspecified

REFERENCE 1 (bases 1 to 1020)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Wednesday, Jun 19, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..1020

/organism="unspecified"

/mol_type="genomic DNA"

promoter 71..89

/label=T7 promoter

/note="promoter for bacteriophage T7 RNA polymerase"

RBS 121..143

/note="efficient ribosome binding site from bacteriophage

T7 gene 10 (Olins and Rangwala, 1989)"

CDS 151..855

/locus_tag="sfGFP"

/label=sfGFP

CDS 856..900

/locus_tag="TnaC"

/label=TnaC

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121 TTTGTTTAAC TTTAAGAAGG AGATATACAT ATGAGCAAAG GTGAAGAACT GTTTACCGGC
181 GTTGTGCCGA TTCTGGTGGA ACTGGATGGC GATGTGAACG GTCACAAATT CAGCGTGCCT
241 GGTGAAGGTG AAGGCGATGC CACGATTGGC AAACGTGACG TGAAATTTAT CTGCACCACC
301 GGCAAACTGC CGGTGCCGTG GCCGACGCTG GTGACCACCC TGACCTATGG CGTTCAGTGT
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421 GGCTATGTGC AGGAACGTAC GATTAGCTTT AAAGATGATG GCAAATATAA AACGCGCGCC
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541 AAAGAAGATG GCAATATCCT GGGCCATAAA CTGGAATACA ACTTTAATAG CCATAATGTT
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721 GGTCCGGTGC TGCTGCCGGA TAATCATTAT CTGAGCACGC AGACCGTTCT GTCTAAAGAT
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841 ATTACGTGGA GCCATAAATG GTTCAATATT GACAACAAAA TTGTCGATCA CCGCCCTTGA
901 TTTGCCCTTC TGTAGCCATC ACCAGAGCCA AACC GATTAG ATTCAATGTG ATCTATTTGT
961 TTGCTATATC TTAATTTTGC CTTTGTGCAA GGTCATCTCT CGTTTATTTA CTTGTTTTAG
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GFP-TnaC (W12R) template for *in vitro* translation

LOCUS Exported 1020 bp ds-DNA linear UNA 19-JUN-2019

DEFINITION natural linear DNA

ACCESSION .

VERSION .

KEYWORDS .

SOURCE natural DNA sequence

ORGANISM unspecified

REFERENCE 1 (bases 1 to 1020)

AUTHORS Alexander S. Mankin

TITLE Direct Submission

JOURNAL Exported Wednesday, Jun 19, 2019 from SnapGene 4.3.10

<https://www.snapgene.com>

FEATURES Location/Qualifiers

source 1..1020

/organism="unspecified"

/mol_type="genomic DNA"

promoter 71..89

/label=T7 promoter

/note="promoter for bacteriophage T7 RNA polymerase"

RBS 121..143

/note="efficient ribosome binding site from bacteriophage

T7 gene 10 (Olins and Rangwala, 1989)"

CDS 151..855

/locus_tag="sfGFP"

/label=sfGFP

CDS 856..900

/locus_tag="TnaC W12R"

/label=TnaC W12R

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121 TTTGTTTAAC TTTAAGAAGG AGATATACAT ATGAGCAAAG GTGAAGAACT GTTTACCGGC
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241 GGTGAAGGTG AAGGCGATGC CACGATTGGC AAACCTGACGC TGAAATTTAT CTGCACCACC
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781 CCGAACGAAA AAGGCACGCG GGACCACATG GTTCTGCACG AATATGTGAA TCGGCGAGGT
841 ATTACGTGGA GCCATAAACG GTTCAATATT GACAACAAAA TTGTCGATCA CCGCCCTTGA
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