LOCUS 12-part\_LacIZ\_Assembly 7002 bp DNA circular UNA 03-AUG-2023

DEFINITION .

ACCESSION urn.local...ol-gl0vr0g

VERSION urn.local...ol-gl0vr0g

KEYWORDS .

SOURCE

ORGANISM .

FEATURES Location/Qualifiers

primer\_bind 234..260

/standard\_name="Forward (CW) Analysis Primer"

regulatory 254..272

/note="Geneious type: promoter"

/note="promoter for bacteriophage SP6 RNA polymerase"

/standard\_name="SP6 promoter"

misc\_feature 326..669

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F1"

misc\_feature 326..329

/note="Geneious type: ligation"

/standard\_name="Ligation"

CDS complement(330..3404)

/note="One of three structural genes in the lac operon -

responsible for cleaving lactose"

/product="β-galactosidase"

/gene="lacZ"

/standard\_name="lacZ"

misc\_feature 666..1090

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F2"

misc\_feature 666..669

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 1087..1444

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F3"

misc\_feature 1087..1090

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 1441..1885

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F4"

misc\_feature 1441..1444

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 1882..2351

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F5"

misc\_feature 1882..1885

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 2348..2686

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F6"

misc\_feature 2348..2351

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 2683..3283

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F7"

misc\_feature 2683..2686

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 3280..3833

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F8"

misc\_feature 3280..3283

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature complement(3412..3434)

/note="Geneious type: RBS"

/standard\_name="RBS"

protein\_bind 3449..3473

/standard\_name="lac operator"

regulatory complement(3477..3507)

/note="Geneious type: promoter"

/note="promoter sequence of the lac operon"

/regulatory\_class="promoter"

/standard\_name="lac"

regulatory 3813..3890

/note="Geneious type: promoter"

/note="lacIq promoter region"

/regulatory\_class="promoter"

/standard\_name="lacIq"

misc\_feature 3830..4226

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F9"

misc\_feature 3830..3833

/note="Geneious type: ligation"

/standard\_name="Ligation"

CDS 3891..4973

/note="lactose operon repressor"

/product="Lac repressor (DNA-binding protein)"

/gene="lacI"

/standard\_name="lacI"

misc\_feature 4223..4537

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F10"

misc\_feature 4223..4226

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 4534..4854

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F11"

misc\_feature 4534..4537

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 4851..5176

/note="Geneious type: Concatenated sequence"

/standard\_name="LacIZ-12-F12"

misc\_feature 4851..4854

/note="Geneious type: ligation"

/standard\_name="Ligation"

misc\_feature 5173..329

/note="Geneious type: Concatenated sequence"

/standard\_name="pGGAselect"

misc\_feature 5173..5176

/note="Geneious type: ligation"

/standard\_name="Ligation"

primer\_bind complement(5239..5264)

/standard\_name="Reverse (CCW) Analysis Primer"

regulatory complement(5246..5264)

/note="Geneious type: promoter"

/note="promoter for bacteriophage T7 RNA polymerase"

/standard\_name="T7 promoter"

CDS complement(5375..6034)

/codon\_start=1

/gene="<i>cat</i>"

/note="confers resistance to chloramphenicol"

/product="chloramphenicol acetyltransferase"

/transl\_table=1

/translation="MEKKITGYTTVDISQWHRKEHFEAFQSVAQCTYNQTVQLDITAF

LKTVKKNKHKFYPAFIHILARLMNAHPEFRMAMKDGELVIWDSVHPCYTVFHEQTETF

SSLWSEYHDDFRQFLHIYSQDVACYGENLAYFPKGFIENMFFVSANPWVSFTSFDLNV

ANMDNFFAPVFTMGKYYTQGDKVLMPLAIQVHHAVCDGFHVGRMLNELQQYCDEWQGG

A\*"

/standard\_name="CmR"

regulatory complement(6035..6137)

/note="Geneious type: promoter"

/note="promoter of the <i>E. coli cat</i> gene encoding

chloramphenicol acetyltransferase"

/standard\_name="cat promoter"

rep\_origin 6238..6826

ORIGIN

1 cgaaaaatca ataatcagac aacaagatgt gcgaactcga tattttacac gactctcttt

61 accaattctg ccccgaatta cacttaaaac gactcaacag cttaacgttg gcttgccacg

121 cattacttga ctgtaaaact ctcactctta ccgaacttgg ccgtaacctg ccaaccaaag

181 cgagaacaaa acataacatc aaacgaatcg accgattgtt aggtaatcgt cacctgcagg

241 aaggtttaaa cgcatttagg tgacactata gaagtgtgta tcgctcgagg gatccgaatt

301 cgaagtcttg gtacggagcg agaccggagt catttttgac accagaccaa ctggtaatgg

361 tagcgaccgg cgctcagctg gaattccgcc gatactgacg ggctccagga gtcgtcgcca

421 ccaatcccca tatggaaacc gtcgatattc agccatgtgc cttcttccgc gtgcagcaga

481 tggcgatggc tggtttccat cagttgctgt tgactgtagc ggctgatgtt gaactggaag

541 tcgccgcgcc actggtgtgg gccataattc aattcgcgcg tcccgcagcg cagaccgttt

601 tcgctcggga acacgtacgg ggtatacatg tctgacaatg gcagatccca gcggtcaaaa

661 caggcggcag taaggcggtc gggatagttt tcttgcggcc ctaatccgag ccagtttacc

721 cgctctgcta cctgcgccag ctggcagttc aggccaatcc gcgccggatg cggtgtatcg

781 ctcgccactt caacatcaac ggtaatcgcc atttgaccac taccatcaat ccggtaggtt

841 ttccggctga taaataaggt tttcccctga tgctgccacg cgtgagcggt cgtaatcagc

901 accgcatcag caagtgtatc tgccgtgcac tgcaacaacg ctgcttcggc ctggtaatgg

961 cccgccgcct tccagcgttc gacccaggcg ttagggtcaa tgcgggtcgc ttcacttacg

1021 ccaatgtcgt tatccagcgg tgcacgggtg aactgatcgc gcagcggcgt cagcagttgt

1081 tttttatcgc caatccacat ctgtgaaaga aagcctgact ggcggttaaa ttgccaacgc

1141 ttattaccca gctcgatgca aaaatccatt tcgctggtgg tcagatgcgg gatggcgtgg

1201 gacgcggcgg ggagcgtcac actgaggttt tccgccagac gccactgctg ccaggcgctg

1261 atgtgcccgg cttctgacca tgcggtcgcg ttcggttgca ctacgcgtac tgtgagccag

1321 agttgcccgg cgctctccgg ctgcggtagt tcaggcagtt caatcaactg tttaccttgt

1381 ggagcgacat ccagaggcac ttcaccgctt gccagcggct taccatccag cgccaccatc

1441 cagtgcagga gctcgttatc gctatgacgg aacaggtatt cgctggtcac ttcgatggtt

1501 tgcccggata aacggaactg gaaaaactgc tgctggtgtt ttgcttccgt cagcgctgga

1561 tgcggcgtgc ggtcggcaaa gaccagaccg ttcatacaga actggcgatc gttcggcgta

1621 tcgccaaaat caccgccgta agccgaccac gggttgccgt tttcatcata tttaatcagc

1681 gactgatcca cccagtccca gacgaagccg ccctgtaaac ggggatactg acgaaacgcc

1741 tgccagtatt tagcgaaacc gccaagactg ttacccatcg cgtgggcgta ttcgcaaagg

1801 atcagcgggc gcgtttctcc aggtagcgaa agccattttt tgatggacca tttcggcaca

1861 gccgggaagg gctggtcctc atccacgcgc gcgtacatcg ggcaaataat atcggtggcc

1921 gtggtgtcgg ctccgccgcc ttcatactgc accgggcggg aaggatcgac agatttgatc

1981 cagcgataca gcgcgtcgtg attagcgccg tggcctgatt cattccccag cgaccagatg

2041 atcacactcg ggtgattacg atcgcgctgc accattcgcg ttacgcgttc gctcatcgcc

2101 ggtagccagc gcggatcatc ggtcagacga ttcattggca ccatgccgtg ggtttcaata

2161 ttggcttcat ccaccacata caggccgtag cggtcgcaca gcgtgtacca cagcggatgg

2221 ttcggataat gcgaacagcg cacggcgtta aagttgttct gcttcatcag caggatatcc

2281 tgcaccatcg tctgctcatc catgacctga ccatgcagag gatgatgctc gtgacggtta

2341 acgcctcgaa tcagcaacgg cttgccgttc agcagcagca gaccattttc aatccgcacc

2401 tcgcggaaac cgacatcgca ggcttctgct tcaatcagcg tgccgtcggc ggtgtgcagt

2461 tcaaccaccg cacgatagag attcgggatt tcggcgctcc acagtttcgg gttttcgacg

2521 ttcagacgta gtgtgacgcg atcggcataa ccaccacgct catcgataat ttcaccgccg

2581 aaaggcgcgg tgccgctggc gacctgcgtt tcaccctgcc ataaagaaac tgttacccgt

2641 aggtagtcac gcaactcgcc gcacatctga acttcagcct ccagtacagc gcggctgaaa

2701 tcatcattaa agcgagtggc aacatggaaa tcgctgattt gtgtagtcgg tttatgcagc

2761 aacgaaacgt cacggaaaat gccgctcatc cgccacatat cctgatcttc cagataactg

2821 ccgtcactcc agcgcagcac catcaccgcg aggcggtttt ctccggcgcg taaaaatgcg

2881 ctcaggtcaa attcagacgg caaacgactg tcctggccgt aaccgaccca gcgcccgttg

2941 caccacagat gaaacgccga gttaacgcca tcaaaaataa ttcgcgtctg gccttcctgt

3001 agccagcttt catcaacatt aaatgtgagc gagtaacaac ccgtcggatt ctccgtggga

3061 acaaacggcg gattgaccgt aatgggatag gtcacgttgg tgtagatggg cgcatcgtaa

3121 ccgtgcatct gccagtttga ggggacgacg acagtatcgg cctcaggaag atcgcactcc

3181 agccagcttt ccggcaccgc ttctggtgcc ggaaaccagg caaagcgcca ttcgccattc

3241 aggctgcgca actgttggga agggcgatcg gtgcgggcct cttcgctatt acgccagctg

3301 gcgaaagggg gatgtgctgc aaggcgatta agttgggtaa cgccagggtt ttcccagtca

3361 cgacgttgta aaacgacggc cagtgaatcc gtaatcatgg tcatatgtat atctccttct

3421 taaagttaaa caaaattatt tctagagggg aattgttatc cgctcacaat tccacacaac

3481 atacgagccg gaagcataaa gtgtaaagcc tgggatcgag atctcgatcc tctacgccgg

3541 acgcatcgtg gccggcatca ccggcgccac aggtgcggtt gctggcgcct atatcgccga

3601 catcaccgat ggggaagatc gggctcgcca cttcgggctc atgagcgctt gtttcggcgt

3661 gggtatggtg gcaggccccg tggccggggg actgttgggc gccatctcct tgcatgcacc

3721 attccttgcg gcggcggtgc tcaacggcct caacctacta ctgggctgct tcctaatgca

3781 ggagtcgcat aagggagagc gtcgagatcc cggacaccat cgaatggcgc aaaacctttc

3841 gcggtatggc atgatagcgc ccggaagaga gtcaattcag ggtggtgaat gtgaaaccag

3901 taacgttata cgatgtcgca gagtatgccg gtgtctctta tcagaccgtt tcccgcgtgg

3961 tgaaccaggc cagccacgtt tctgcgaaaa cgcgggaaaa agtggaagcg gcgatggcgg

4021 agctgaatta cattcccaac cgcgtggcac aacaactggc gggcaaacag tcgttgctga

4081 ttggcgttgc cacctccagt ctggccctgc acgcgccgtc gcaaattgtc gcggcgatta

4141 aatctcgcgc cgatcaactg ggtgccagcg tggtggtgtc gatggtagaa cgaagcggcg

4201 tcgaagcctg taaagcggcg gtgcacaatc ttctcgcgca acgcgtcagt gggctgatca

4261 ttaactatcc gctggatgac caggatgcca ttgctgtgga agctgcctgc actaatgttc

4321 cggcgttatt tcttgatgtc tctgaccaga cacccatcaa cagtattatt ttctcccatg

4381 aagatggtac gcgactgggc gtggagcatc tggtcgcatt gggtcaccag caaatcgcgc

4441 tgttagcggg cccattaagt tctgtctcgg cgcgtctgcg tctggctggc tggcataaat

4501 atctcactcg caatcaaatt cagccgatag cggaacggga aggcgactgg agtgccatgt

4561 ccggttttca acaaaccatg caaatgctga atgagggcat cgttcccact gcgatgctgg

4621 ttgccaacga tcagatggcg ctgggcgcaa tgcgcgccat taccgagtcc gggctgcgcg

4681 ttggtgcgga tatctcggta gtgggatacg acgataccga agatagctca tgttatatcc

4741 cgccgttaac caccatcaaa caggattttc gcctgctggg gcaaaccagc gtggaccgct

4801 tgctgcaact ctctcagggc caggcggtga agggcaatca gctgttgcca gtctcactgg

4861 tgaaaagaaa aaccaccctg gcgcccaata cgcaaaccgc ctctccccgc gcgttggccg

4921 attcattaat gcagctggca cgacaggttt cccgactgga aagcgggcag tgagcgcaac

4981 gcaattaatg taagttagct cactcattag gcaccgggat ctcgaccgat gcccttgaga

5041 gccttcaacc cagtcagctc cttccggtgg gcgcggggca tgactatcgt cgccgcactt

5101 atgactatct tctttatcat gcaactcgta ggacaggtgc cggcagcgct ctgggtcatt

5161 ttcggcgagg acccatggtc tcaccattcc tgtagacttc ttaattaaga cgtcagaatt

5221 ctcgaggcgg ccgcatgtga gtctccctat agtgagtcgt attaatttcg cgggcggaac

5281 ccctatttgt ttatttttct aaatacattc aaatatgtat ccgctcatga gtagcaccag

5341 gcgtttaagg gcaccaataa ctgccttaaa aaaattacgc cccgccctgc cactcatcgc

5401 agtactgttg taattcatta agcattctgc cgacatggaa gccatcacaa acggcatgat

5461 gaacctgaat cgccagcggc atcagcacct tgtcgccttg cgtataatat ttgcccatgg

5521 tgaaaacggg ggcgaagaag ttgtccatat tggccacgtt taaatcaaaa ctggtgaaac

5581 tcacccaggg attggctgag acaaaaaaca tattctcaat aaacccttta gggaaatagg

5641 ccaggttttc accgtaacac gccacatctt gcgaatatat gtgtagaaac tgccggaaat

5701 cgtcgtggta ttcactccag agcgatgaaa acgtttcagt ttgctcatgg aaaacggtgt

5761 aacaagggtg aacactatcc catatcacca gctcaccgtc tttcattgcc atacgaaatt

5821 ccggatgagc attcatcagg cgggcaagaa tgtgaataaa ggccggataa aacttgtgct

5881 tatttttctt tacggtcttt aaaaaggccg taatatccag ctgaacggtc tggttatagg

5941 tacattgagc aactgactga aatgcctcaa aatgttcttt acgatgccat tgggatatat

6001 caacggtggt atatccagtg atttttttct ccattttagc ttccttagct cctgaaaatc

6061 tcgataactc aaaaaatacg cccggtagtg atcttatttc attatggtga aagttggaac

6121 ctcttacgtg ccgatcaaag tctcattttc gccaaaagtt gtcatgacca aaatccctta

6181 acgtgagttt tcgttccact gagcgtcaga ccccgtagaa aagatcaaag gatcttcttg

6241 agatcctttt tttctgcgcg taatctgctg cttgcaaaca aaaaaaccac cgctaccagc

6301 ggtggtttgt ttgccggatc aagagctacc aactcttttt ccgaaggtaa ctggcttcag

6361 cagagcgcag ataccaaata ctgttcttct agtgtagccg tagttaggcc accacttcaa

6421 gaactctgta gcaccgccta catacctcgc tctgctaatc ctgttaccag tggctgctgc

6481 cagtggcgat aagtcgtgtc ttaccgggtt ggactcaaga cgatagttac cggataaggc

6541 gcagcggtcg ggctgaacgg ggggttcgtg cacacagccc agcttggagc gaacgaccta

6601 caccgaactg agatacctac agcgtgagct atgagaaagc gccacgcttc ccgaagggag

6661 aaaggcggac aggtatccgg taagcggcag ggtcggaaca ggagagcgca cgagggagct

6721 tccaggggga aacgcctggt atctttatag tcctgtcggg tttcgccacc tctgacttga

6781 gcgtcgattt ttgtgatgct cgtcaggggg gcggagccta tggaaaaacg ccagcaatgc

6841 ggccttttta cggttcctgg ccttttgctg gccttttgct cacatgttct ttcctgcgtt

6901 atcccctgat tctgtggata accgtattac cgcctttgag tgagctgata ccgctcgccg

6961 cagccgaacg accgagcgca gcgagtcagt gagcgaggaa gc

//