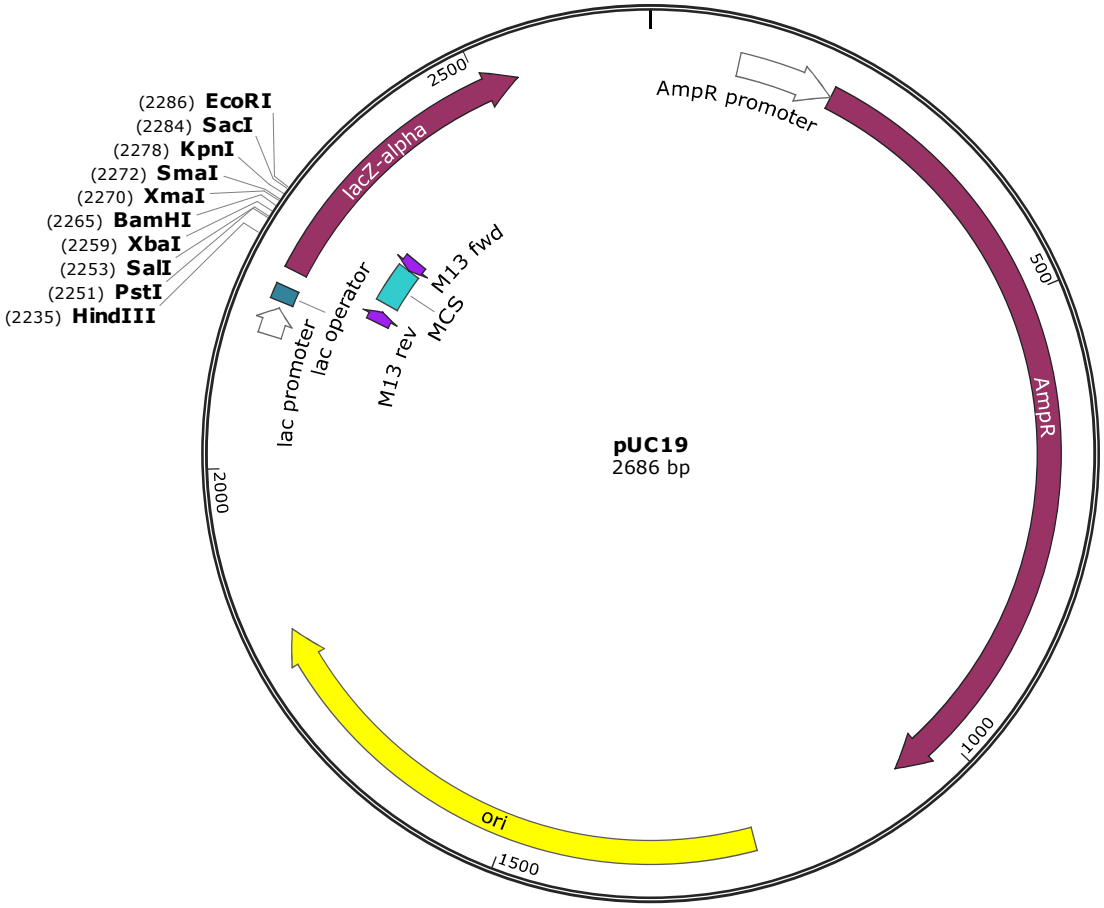

ACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTC
TGTACAAGAAAGGACGCAATAGGGGACTAAGACACCTATTGGCATAATGGCGGAAACTCACTCGACTATGGCGAG 1950

GCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAGCGCCCAATACGCAAACCGCCTC
CGGCGTCGGCTTGCTGGCTCGCGTCGCTCAGTCACTCGCTCCTTCGCCTTCTCGCGGGTTATGCGTTTGGCGGAG 2025

TCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGAGCGCA
AGGGGCGCGCAACCGGCTAAGTAATTACGTCGACCGTGCTGTCCAAAGGGCTGACCTTTCGCCCGTCACTCGCGT 2100

ACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGT
TGCGTTAATTACACTCAATCGAGTGAGTAATCCGTGGGGTCCGAAATGTGAAATACGAAGGCCGAGCATACAACA 2175

lac promoter

HindIII

GTGGAATTGTGAGCGGATAACAATTTCACACAGGAAACAGCTATGACCATGATTACGCCAAGCTTGCATGCCTGC
CACCTTAACACTCGCCTATTGTTAAAGTGTGTCCTTTGTCGATACTGGTACTAATGCGGTTCGAACGTACGGACG 2250

1 5 10
Met Thr Met Ile Thr Pro Ser Leu His Ala Cys

lac operator
lacZ-alpha
M13 rev
MCS

PstI **SalI** **XbaI** **BamHI** **XmaI** **SmaI** **KpnI** **SacI** **EcoRI**

AGGTCGACTCTAGAGGATCCCCGGGTACCGAGCTCGAATTCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAA
TCCAGCTGAGATCTCCTAGGGGCCCATGGCTCGAGCTTAAGTGACCGGCAGCAAAATGTTGCAGCACTGACCCTT 2325

15 20 25 30 35
Arg Ser Thr Leu Glu Asp Pro Arg Val Pro Ser Ser Asn Ser Leu Ala Val Val Leu Gln Arg Arg Asp Trp Glu

lacZ-alpha
MCS
M13 fwd


AACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCC
2400
TTGGGACCGCAATGGGTTGAATTAGCGGAACGTCGTGTAGGGGGAAAGCGGTCGACCGCATTATCGCTTCTCCGG
40 45 50 55 60
Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Glu Glu Ala
lacZ-alpha
CGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCCTGATGCGGTATTTTCTCCTTACG
2475
GCGTGGCTAGCGGGAAGGGTTGTCAACGCGTCGGACTTACCGCTTACCGCGGACTACGCCATAAAAGAGGAATGC
65 70 75 80 85
Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Leu Met Arg Tyr Phe Leu Leu Thr
lacZ-alpha
CATCTGTGCGGTATTTCACACCGCATATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAG
2550
GTAGACACGCCATAAAGTGTGGCGTATACCACGTGAGAGTCATGTTAGACGAGACTACGGCGTATCAATTCGGTC
90 95 100 105
His Leu Cys Gly Ile Ser His Arg Ile Trp Cys Thr Leu Ser Thr Ile Cys Ser Asp Ala Ala *
lacZ-alpha
CCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCT
2625
GGGGCTGTGGGCGGTTGTGGGCGACTGCGCGGGACTGCCCGAACAGACGAGGGCCGTAGGCGAATGTCTGTTCGA