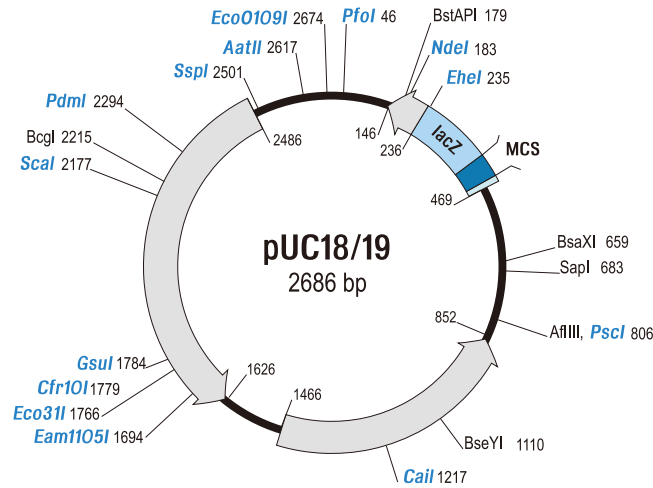


pUC18/19 Vector Map



Multiple Cloning Sites of pUC18:

M13 → *HindIII* *PaeI* *SdaI* *BevI* *HincII* *SalI* *XmiI* *XbaI* *BamHI* *Cfr9I* *Eco88I* *Acc651I* *Eco241I* *EcoRI* *Ecl136I* *SacI* *SacI* *XapI*
 5' G TAA AAC GAC GGC CAG TGC CAA GCT TGC ATG CCT GCA GGT CGA CTC TAG AGG ATC CCC GGG TAC CGA GCT CGA ATT C
 3' C ATT TTG CTG CCG GTC ACG GTT CGA ACG TAC GGA CGT CCA GCT GAG ATC TCC TAG GGG CCC ATG GCT CGA GCT TAA G
 LacZ ← Val Val Ala Leu Ala Leu Ser Ala His Arg Cys Thr Ser Glu Leu Pro Asp Gly Pro Val Ser Ser Ser Asn

GT AAT CAT GGT CAT AGC TGT TTC CTG 3'
 CA TTA GTA CCA GTA TCG ACA AAG GAC 5'
 Thr Ile Met Thr Met
 ← M13

Multiple Cloning Sites of pUC19:

M13 → *EcoRI* *XapI* *Ecl136I* *Eco241I* *SacI* *Acc651I* *KpnI* *Cfr9I* *Eco88I* *SmaI* *BamHI* *XbaI* *HincII* *SalI* *XmiI* *BveI* *SdaI* *PaeI* *HindIII*
 5' G TAA AAC GAC GGC CAG TGA ATT CGA GCT CGG TAC CCG GGG ATC CTC TAG AGT CGA CCT GCA GGC ATG CAA GCT TGG
 3' C ATT TTG CTG CCG GTC ACT TAA GCT CGA GCC ATG GGC CCC TAG GAG ATC TCA GAT GGA CGT CCG TAC GTT CGA ACC
 LacZ ← Val Val Ala Leu Ser Asn Ser Ser Pro Val Arg Pro Asp Glu Leu Thr Ser Arg Cys Ala His Leu Ser Pro

CGT AAT CAT GGT CAT AGC TGT TTC CTG 3'
 GCA TTA GTA CCA GTA TCG ACA AAG GAC 5'
 Thr Ile Met Thr Met
 ← M13

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pUC18 Sequence (2686 bp)

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1      TCGCGCGTTT CGGTGATGAC GGTGAAAACC TCTGACACAT GCAGCTCCCG GAGACGGTCA
61     CAGCTTGTCT GTAAGCGGAT GCCGGGAGCA GACAAGCCCG TCAGGGCGCG TCAGCGGGTG
121    TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA GCAGATTGTA CTGAGAGTGC
181    ACCATATGCG GTGTGAAATA CCGCACAGAT GCGTAAGGAG AAAATACCGC ATCAGGCGCC
241    ATTCGCCATT CAGGCTGCGC AACTGTTGGG AAGGGCGATC GGTGCGGGCC TCTTCGCTAT
301    TACGCCAGCT GCGGAAAGGG GGATGTGCTG CAAGGCGATT AAGTTGGGTA ACGCCAGGGT
361    TTTCCAGTC ACGACGTTGT AAAACGACGG CCAGTGCCAA GCTTGCATGC CTGCAGGTGC
421    ACTCTAGAGG ATCCCCGGGT ACCGAGCTCG AATTCGTAAT CATGGTCATA GCTGTTTCTT
481    GTGTGAAATT GTTATCCGCT CACAATTCCA CACAACATAC GAGCCGGAAG CATAAAGTGT
541    AAAGCCTGGG GTGCCTAATG AGTGAGCTAA CTCACATTAA TTGCGTTGCG CTCACTGCCC
601    GCTTTCCAGT CGGGAAACCT GTCGTGCCAG CTGCATTAAT GAATCGGCCA ACGCGCGGGG
661    AGAGGCGGTT TGCGTATTGG GCGCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG
721    GTCGTTCCGGC TGCGGCGAGC GGTATCAGCT CACTCAAAGG CGGTAATACG GTTATCCACA
781    GAATCAGGGG ATAACGCAGG AAAGAACATG TGAGCAAAAG GCCAGCAAAA GGCAGGAAC
841    CGTAAAAGG CCGCGTTGCT GGCGTTTTTC CATAGGCTCC GCCCCCCTGA CGAGCATCAC
901    AAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG ATACCAGGCG
961    TTTCCCCCTG GAAGCTCCCT CGTGCGCTCT CCTGTTCCGA CCCTGCCGCT TACCGGATAC
1021   CTGTCCGCCT TTCTCCCTTC GGAAGCGTG GCGCTTTCTC ATAGCTCACG CTGTAGGTAT
1081   CTCAGTTCGG TGTAGGTCGT TCGCTCCAAG CTGGGCTGTG TGCACGAACC CCCCGTTCAG
1141   CCCGACCGCT GCGCCTTATC CGGTAACATC CGTCTTGAGT CCAACCCGGT AAGACACGAC
1201   TTATCGCCAC TGGCAGCAGC CACTGGTAAC AGGATTAGCA GAGCGAGGTA TGTAGGCGGT
1261   GCTACAGAGT TCTTGAAGTG GTGGCCTAAC TACGGCTACA CTAGAAGGAC AGTATTTGGT
1321   ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GGAAAAGAG TTGGTAGCTC TTGATCCGGC
1381   AAACAAACCA CCGCTGGTAG CCGTGGTTTT TTTGTTTGCA AGCAGCAGAT TACGCGCAGA
1441   AAAAAAGGAT CTCAAGAAGA TCCTTTGATC TTTTCTACGG GGTCTGACGC TCAGTGGAAC
1501   GAAAACACAC GTTAAGGGAT TTTGGTCATG AGATTATCAA AAAGGATCTT CACCTAGATC
1561   CTTTTAAATT AAAAATGAAG TTTTAAATCA ATCTAAAGTA TATATGAGTA AACTTGGTCT
1621   GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG CGATCTGTCT ATTTTCGTTCA
1681   TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACTACGA TACGGGAGGG CTTACCATCT
1741   GGCCCAGTG CTGCAATGAT ACCGCGAGAC CCACGCTCAC CGGCTCCAGA TTTATCAGCA
1801   ATAAACCAGC CAGCCGGAAG GGCCGAGCGC AGAAGTGGTC CTGCAACTTT ATCCGCCTCC
1861   ATCCAGTCTA TTAATTGTTG CCGGGAAGCT AGAGTAAGTA GTTCGCCAGT TAATAGTTG
1921   CGCAACGTTG TTGCCATTGC TACAGGCATC GTGGTGTAC GCTCGTCGTT TGGTATGGCT
1981   TCATTCAGCT CCGGTTCCCA ACGATCAAGG CGAGTTACAT GATCCCCCAT GTTGTGCAA
2041   AAAGCGGTTA GCTCCTTCGG TCCTCCGATC GTTGTGAGAA GTAAGTTGGC CGCAGTGTTA
2101   TCACTCATGG TTATGGCAGC ACTGCATAAT TCTCTTACTG TCATGCCATC CGTAAGATGC
2161   TTTTCTGTGA CTGGTGAGTA CTCAACCAAG TCATTCTGAG AATAGTGTAT GCGGCGACCG
2221   AGTTGCTCTT GCCCGGCGTC AATACGGGAT AATACCGCGC CACATAGCAG AACTTTAAAA
2281   GTGCTCATCA TTGGAAAACG TTCTTCGGGG CGAAAACCTCT CAAGGATCTT ACCGCTGTTG
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2341 AGATCCAGTT CGATGTAACC CACTCGTGCA CCCAACTGAT CTTTCAGCATC TTTTACTTTC
2401 ACCAGCGTTT CTGGGTGAGC AAAAACAGGA AGGCAAAATG CCGCAAAAAA GGGAATAAGG
2461 GCGACACGGA AATGTTGAAT ACTCATACTC TTCCTTTTTT AATATTATTG AAGCATTTAT
2521 CAGGGTTATT GTCTCATGAG CGGATACATA TTTGAATGTA TTTAGAAAAA TAAACAAATA
2581 GGGGTTCCGC GCACATTTCC CCGAAAAGTG CCACCTGACG TCTAAGAAAC CATTATTATC
2641 ATGACATTAA CCTATAAAAA TAGGCGTATC ACGAGGCCCT TTCGTC
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pUC19 Sequence (2686 bp)

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61 CAGCTTGTCT GTAAGCGGAT GCCGGGAGCA GACAAGCCCG TCAGGGCGCG TCAGCGGGTG
121 TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA GCAGATTGTA CTGAGAGTGC
181 ACCATATGCG GTGTGAAATA CCGCACAGAT GCGTAAGGAG AAAATACCGC ATCAGGCGCC
241 ATTCGCCATT CAGGCTGCGC AACTGTTGGG AAGGGCGATC GGTGCGGGCC TCTTCGCTAT
301 TACGCCAGCT GCGGAAAGGG GGATGTGCTG CAAGGCGATT AAGTTGGGTA ACGCCAGGGT
361 TTTCCAGTC ACGACGTTGT AAAACGACGG CCAGTGAATT CGAGCTCGGT ACCCGGGGAT
421 CCTCTAGAGT CGACCTGCAG GCATGCAAGC TTGGCGTAAT CATGGTCATA GCTGTTTCCT
481 GTGTGAAATT GTTATCCGCT CACAATTCCA CACAACATAC GAGCCGGAAG CATAAAGTGT
541 AAAGCCTGGG GTGCCTAATG AGTGAGCTAA CTCACATTAA TTGCGTTGCG CTCACTGCCC
601 GCTTTCCAGT CGGGAAACCT GTCGTGCCAG CTGCATTAAT GAATCGGCCA ACGCGCGGGG
661 AGAGGCGGTT TGCGTATTGG GCGCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG
721 GTCGTTCCGC TCGGGCGAGC GGTATCAGCT CACTCAAAGG CGGTAATACG GTTATCCACA
781 GAATCAGGGG ATAACGCAGG AAAGAACATG TGAGCAAAAG GCCAGCAAAA GGCCAGGAAC
841 CGTAAAAAGG CCGCGTTGCT GCGTTTTTTC CATAGGCTCC GCCCCCCTGA CGAGCATCAC
901 AAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG ATACCAGGCG
961 TTTCCCCTG GAAGCTCCCT CGTGCGTCTT CCTGTTCCGA CCCTGCCGCT TACCGGATAC
1021 CTGTCCGCCT TTCTCCCTTC GGAAGCGTG GCGCTTTCTC ATAGCTCACG CTGTAGGTAT
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1261 GCTACAGAGT TCTTGAAGTG GTGGCCTAAC TACGGCTACA CTAGAAGGAC AGTATTTGGT
1321 ATCTGCGCTC TGCTGAAGCC AGTTACCTTC GGAAAAAGAG TTGGTAGCTC TTGATCCGGC
1381 AAACAAACCA CCGCTGGTAG CCGTGGTTTT TTTGTTTGCA AGCAGCAGAT TACGCGCAGA
1441 AAAAAAGGAT CTCAAGAAGA TCCTTTGATC TTTTCTACGG GGTCTGACGC TCAGTGGAAC
1501 GAAAACTCAC GTTAAGGGAT TTTGGTCATG AGATTATCAA AAAGGATCTT CACCTAGATC
1561 CTTTTAAATT AAAAAATGAAG TTTTAAATCA ATCTAAAGTA TATATGAGTA AACTTGGTCT
1621 GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG CGATCTGTCT ATTTTCGTTCA
1681 TCCATAGTTG CCTGACTCCC CGTCGTGTAG ATAACCTACGA TACGGGAGGG CTTACCATCT
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1741	GGCCCCAGTG	CTGCAATGAT	ACCGCGAGAC	CCACGCTCAC	CGGCTCCAGA	TTTATCAGCA
1801	ATAAACCAGC	CAGCCGGAAG	GGCCGAGCGC	AGAAGTGGTC	CTGCAACTTT	ATCCGCCTCC
1861	ATCCAGTCTA	TTAATTGTTG	CCGGGAAGCT	AGAGTAAGTA	GTTCGCCAGT	TAATAGTTTG
1921	CGCAACGTTG	TTGCCATTGC	TACAGGCATC	GTGGTGTAC	GCTCGTCGTT	TGGTATGGCT
1981	TCATTCAGCT	CCGGTTCCCA	ACGATCAAGG	CGAGTTACAT	GATCCCCCAT	GTTGTGCAAA
2041	AAAGCGGTTA	GCTCCTTCGG	TCCTCCGATC	GTTGTCAGAA	GTAAGTTGGC	CGCAGTGTTA
2101	TCACTCATGG	TTATGGCAGC	ACTGCATAAT	TCTCTTACTG	TCATGCCATC	CGTAAGATGC
2161	TTTTCTGTGA	CTGGTGAGTA	CTCAACCAAG	TCATTCTGAG	AATAGTGTAT	GCGGCGACCG
2221	AGTTGCTCTT	GCCCGGCGTC	AATACGGGAT	AATACCGCGC	CACATAGCAG	AACTTTAAAA
2281	GTGCTCATCA	TTGGAAAACG	TTCTTCGGGG	CGAAAACCTCT	CAAGGATCTT	ACCGCTGTTG
2341	AGATCCAGTT	CGATGTAACC	CACTCGTGCA	CCCAACTGAT	CTTCAGCATC	TTTTACTTTC
2401	ACCAGCGTTT	CTGGGTGAGC	AAAAACAGGA	AGGCAAAATG	CCGCAAAAAA	GGGAATAAGG
2461	GCGACACGGA	AATGTTGAAT	ACTCATACTC	TTCCTTTTTTC	AATATTATTG	AAGCATTTAT
2521	CAGGGTTATT	GTCTCATGAG	CGGATACATA	TTTGAATGTA	TTTAGAAAAA	TAAACAAATA
2581	GGGGTCCGC	GCACATTTCC	CCGAAAAGTG	CCACCTGACG	TCTAAGAAAC	CATTATTATC
2641	ATGACATTAA	CCTATAAAAA	TAGGCGTATC	ACGAGGCCCT	TTCGTC	

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