

pTYR MjIYRS2-1(D286)MJR1×3

0001 TGATGCGTGG AAGATTGATC GTCTTGCACC CTGAAAAGAT GCAAAAATCT
E. coli tyrS promoter(1)

0051 TGCTTTAATC GCTGGTACTC CTGATTCTGG CACTTTATTC TATGTCTCTT
0101 TCGCATCTGG CGAAAAGTCG TGTACCGGCA AAGGTGCAGT CGTTATATAC
0151 TTGGAGATTC ATATGTTCCA GCTTGATGCG TGGAAAGATTG ATCGTCTTGC
0201 ACCCTGAAAA GATGCAAAAA TCTTGCTTTA ATCGCTGGTA CTCCTGATTC
E. coli tyrS promoter(2)

0251 TGGCACTTTT ATTCTATGTC TCTTTCGCAT CTGGCGAAAA GTCGTGTACC
0301 GGCAAGGTGC AGTCGTTATA TACTTGAGAT TCATATGAC GAATTTGAAA
Iodotyrosyl-tRNA synthetase (IYRS)

0351 TGATAAAGAG AAACACATCT GAAATTATCA GCGAGGAAGA GTTAAGAGAG
0401 GTTTTAAAAA AAGATGAAAA ATCTGCCTAC ATAGGTTTTG AACCAAGTGG
0451 TAAAATACAT TTAGGGCATT ATCTCCAAAT AAAAAAGATG ATTGATTTAC
0501 AAAATGCTGG ATTTGATATA ATTATATTGT TGGCTGATTT AGCCGCCTAT
0551 TTAAACCAGA AAGGAGAGTT GGATGAGATT AGAAAAATAG GAGATTATAA
0601 CAAAAAAGTT TTTGAAGCAA TGGGGTTAAA GGCAAAATAT GTTTATGGAA
0651 GTGAATTCCA GCTTGATAAG GATTATACAC TGAATGTCTA TAGATTGGCT
0701 TTAAAAACTA CCTTAAAAAG AGCAAGAAGG AGTATGGAAC TTATAGCAAG
0751 AGAGGATGAA AATCCAAAGG TTGCTGAAGT TATCTATCCA ATAATGCAGG
0801 TTAATACCAG TCATTATTTA GCGGTTGATG TTGCAGTTGG AGGGATGGAG
0851 CAGAGAAAAA TACACATGTT AGCAAGGGAG CTTTACCAA AAAAGGTTGT
0901 TTGTATTCAC AACCTGTCT TAACGGGTTT GGATGGAGAA GGAAAGATGA
0951 GTTCTTCAA AGGGAATTTT ATAGCTGTTG ATGACTCTCC AGAAGAGATT
1001 AGGGCTAAGA TAAAGAAAGC AACTGCCCCA GCTGGAGTTG TTGAAGGAAA
1051 TCCAATAATG GAGATAGCTA AATACTTCCT TGAATATCCT TTAACCATAA
1101 AAAGGCCAGA AAAATTTGGT GGAGATTTGA CAGTTAATAG CTATGAGGAG
1151 TTAGAGAGTT TATTTAAAAA TAAGGAATTG CATCCAATGC GTTTAAAAAA
1201 TGCTGTAGCT GAAGAACTTA TAAAGATTTT AGAGCCAATT AGAAAGAGAT
1251 TATAAGATC TGGATCCTCT ACGCCGGACG CATCGTGGCC GGCATCACCG
1301 GCGCCACAGG TCGGGTTGCT GCGCCTATA TCGCCGACAT CACCGATGGG

1351 GAAGATCGGG CTCGCCACTT CGGGCTCATG AGGCATGCGG CGCCGCTTCT
1401 TTGAGCGAAC GATCAAAAAT AAGTGGCGCC CCATCAAAAA AATATTCTCA

lpp promoter

1451 ACATAAAAAA CTTTGTGTAA TACTTGTAAC GCTGCCATCA GACGCATTCC

MJR1 amber suppressor tRNA(1)

1501 GCGGGTAGTT CAGCAGGGCA GAACGGCGGA CTCTAAATCC GCAGGTCGCT

1551 GGTTCAAATC CGGCCCGCCG GACCATTAT CACAGACGCA TTCCGGCGGT

MJR1 amber suppressor tRNA(2)

1601 AGTTCAGCAG GGCAGAACGG CGGACTCTAA ATCCGCAGGT CGCTGGTTCA

1651 AATCCGGCCC GCCGGACCAT TTATCACAGA CGCATTCCGG CGGTAGTTCA

MJR1 amber suppressor tRNA(3)

1701 GCAGGGCAGA ACGGCGGACT CTAAATCCGC AGGTCGCTGG TTCAAATCCG

1751 GCCCGCCGGA CCATTTATCA CAGATTGGAA ATTTTGTATC CTTAGCGAAA

1801 GCTAAGGATT TTTTTTAGTC GACCGATGCC CTTGAGAGCC TTCAACCCAG

1851 TCAGCTCCTT CCGGTGGGCG CGGGGCATGA CTATCGTCGC CGCACTTATG

1901 ACTGTCTTCT TTATCATGCA ACTCGTAGGA CAGGTGCCGG CAGCGCTCTG

1951 GGTCAATTTT CCGCAGGACC GCTTTCGCTG GAGCGCGACG ATGATCGGCC

2001 TGTCGCTTGC GGTATTCGGA ATCTTGCACG CCCTCGCTCA AGCCTTCGTC

2051 ACTGGTCCCG CCACCAAACG TTTCGGCGAG AAGCAGGCCA TTATCGCCGG

2101 CATGGCGGCC GACGCGCTGG GCTACGTCTT GCTGGCGTTC GCGACGCGAG

2151 GCTGGATGGC CTTCCCATTT ATGATTCTTC TCGCTTCCGG CGGCATCGGG

2201 ATGCCCGCGT TGCAGGCCAT GCTGTCCAGG CAGGTAGATG ACGACCATCA

2251 GGGACAGCTT CAAGGATCGC TCGCGGCTCT TACCAGCCTA ACTTCGATCA

2301 CTGGACCGCT GATCGTCACG GCGATTTATG CCGCCTCGGC GAGCACATGG

2351 AACGGGTTGG CATGGATTGT AGGCGCCGCC CTATACCTTG TCTGCCTCCC

2401 CGCGTTGCGT CGCGGTGCAT GGAGCCGGGC CACCTCGACC TGAATGGAAG

2451 CCGGCGGCAC CTCGCTAACG GATTCACCAC TCCAAGAATT GGAGCCAATC

2501 AATTCTTGCG GAGAAGTGT AATGCGCAA CCAACCCTTG GCAGAACATA

2551 TCCATCGCGT CCGCCATCTC CAGCAGCCGC ACGCGGCGCA TCTCGGGCAG

2601 CGTTGGGTCC TGGCCACGGG TGCGCATGAT CGTGCTCCTG TCGTTGAGGA

2651 CCCGGCTAGG CTGGCGGGGT TGCCTTACTG GTTAGCAGAA TGAATCACCG

2701 ATACGCGAGC GAACGTGAAG CGACTGCTGC TGCAAAACGT CTGCGACCTG

2751 AGCAACAACA TGAATGGTCT TCGGTTTCCG TGTTTCGTAA AGTCTGGAAA
 2801 CGCGGAAGTC CCCTACGTGC TGCTGAAGTT GCCCGCAACA GAGAGTGGAA
 2851 CCAACCGGTG ATACCACGAT ACTATGACTG AGAGTCAACG CCATGAGCGG
 2901 CCTCATTCTT TATTCTGAGT TACAACAGTC CGCACCCTG TCCGGTAGCT
 2951 CCTTCCGGTG GGC GCGGGG ATGACTATCG TCGCCGCACT TATGACTGTC
 3001 TTCTTTATCA TGCAACTCGT AGGACAGGTG CCGGCAGCGC CCAACAGTCC
 3051 CCCGGCCACG GGGCCTGCCA CCATACCCAC GCCGAAACAA GCGCCCTGCA
 3101 CCATTATGTT CCGGATCTGC ATCGCAGGAT GCTGCTGGCT ACCCTGTGGA
 3151 ACACCTACAT CTGTATTAAC GAAGCGCTAA CCGTTTTTAT CAGGCTCTGG
 3201 GAGGCAGAAT AAATGATCAT ATCGTCAATT ATTACCTCCA CGGGGAGAGC
 3251 CTGAGCAAAC TGGCCTCAGG CATTTGAGAA GCACACGGTC AACTGCTTC
 3301 CGGTAGTCAA TAAACCGGTA AACCAGCAAT AGACATAAGC GGCTATTTAA
 3351 CGACCCTGCC CTGAACCGAC GACCGGGTCG AATTTGCTTT CGAATTTCTG
 3401 CCATTCATCC GCTTATTATC ACTTATTCAG GCGTAGCACC AGGCGTTTAA
 3451 GGCACCAAT AACTGCCTTA AAAAAATTAC GCCCCGCCCT GCCACTCATC
 3501 GCAGTACTGT TGTAATTCAT TAAGCATTCT GCCGACATGG AAGCCATCAC
 3551 AGACGGCATG ATGAACCTGA ATCGCCAGCG GCATCAGCAC CTTGTGCGCT
 3601 TGCGTATAAT ATTTGCCCAT GGTGAAAACG GGGGCGAAGA AGTTGTCCAT
 3651 ATTGGCCACG TTAAATCAA AACTGGTGAA ACTCACCCAG GGATTGGCTG
 3701 AGACGAAAAA CATATTCTCA ATAAACCCTT TAGGGAAATA GGCCAGGTTT
 3751 TCACCGTAAC ACGCCACATC TTGCGAATAT ATGTGTAGAA ACTGCCGGAA
 3801 ATCGTCGTGG TATTCACTCC AGAGCGATGA AAACGTTTCA GTTTGCTCAT
 3851 GGAAAACGGT GTAACAAGGG TGAACACTAT CCCATATCAC CAGCTCACCG
 3901 TCTTTCATTG CCATACGGAA TTCCGGATGA GCATTCATCA GCGGGGCAAG
 3951 AATGTGAATA AAGGCCGGAT AAAACTTGTG CTTATTTTTT TTTACGGTCT
 4001 TTAAAAGGC CGTAATATCC AGCTGAACGG TCTGGTTATA GGTACATTGA
 4051 GCAACTGACT GAAATGCCTC AAAATGTTCT TTACGATGCC ATTGGGATAT
 4101 ATCAACGGTG GTATATCCAG TGATTTTTTT CTCATTTTA GCTTCCTTAG

Chloramphenicol-acetyltransferase (complementary)

4151 CTCCTGAAAA TCTCGATAAC TCAAAAATA CGCCCGGTAG TGATCTTATT
 4201 TCATTATGGT GAAAGTTGGA ACCTCTTACG TGCCGATCAA CGTCTCATTT
 4251 TCGCCAAAAG TTGGCCCAGG GCTTCCCGGT ATCAACAGGG ACACCAGGAT
 4301 TTATTTATTC TCGGAAGTGA TCTTCCGTCA CAGGTATTTA TTCGGCGCAA
 4351 AGTGCGTCGG GTGATGCTGC CAACTTACTG ATTTAGTGTA TGATGGTGTT
 4401 TTTGAGGTGC TCCAGTGGCT TCTGTTTCTA TCAGCTGTCC CTCCTGTTCA

4451 GCTACTGACG GGGTGGTGCG TAACGGCAAA AGCACCGCCG GACATCAGCG

p15A_origin

4501 CTAGCGGAGT GTATACTGGC TFACTATGTT GGCAGTATG AGGGTGTGAG
4551 TGAAGTGCTT CATGTGGCAG GAGAAAAAAG GCTGCACCCG TCGTTCAGCA
4601 GAATATGTGA TACAGGATAT ATTCCGCTTC CTCGCTCACT GACTCGCTAC
4651 GCTCGGTCGT TCGACTGCGG CGAGCGGAAA TGGCTTACGA ACGGGGCGGA
4701 GATTTCCCTGG AAGATGCCAG GAAGATACTT AACAGGGAAG TGAGAGGGCC
4751 GCGGCAAAGC CGTTTTTCCA TAGGCTCCGC CCCCTGACA AGCATCACGA
4801 AATCTGACGC TCAAATCAGT GGTGGCGAAA CCCGACAGGA CTATAAAGAT
4851 ACCAGGCGTT TCCCCCTGGC GGCTCCCTCG TCGCTCTCC TGTTCCTGCC
4901 TTTCCGGTTA CCGGTGTCAT TCCGCTGTTA TGGCCGCGTT TGTCTCATT
4951 CACGCCTGAC ACTCAGTTC GGGTAGGCAG TTCGCTCAA GCTGGACTGT
5001 ATGCACGAAC CCCCCGTTCA GTCCGACCGC TCGCCTTAT CCGGTAACCTA
5051 TCGTCTTGAG TCCAACCCGG AAAGACATGC AAAAGCACCA CTGGCAGCAG
5101 CCACTGGTAA TTGATTTAGA GGAGTTAGTC TTGAAGTCAT GCGCCGGTTA
5151 AGGCTAAACT GAAAGGACAA GTTTTGGTGA CTGCGCTCCT CCAAGCCAGT
5201 TACCTCGGTT CAAAGAGTTG GTAGCTCAGA GAACCTTCGA AAAACCGCCC
5251 TGCAAGGCGG TTTTTTCGTT TTCAGAGCAA GAGATTACGC GCAGACCAAA
5301 ACGATCTCAA GAAGATCATC TTATTAATCA GATAAAATAT TTCTAGATTT
5351 CAGTGCAATT TATCTCTTCA AATGTAGCAC CTGAAGTCAG CCCCATACGA
5401 TATAAGTTGT AATTCTCATG TTTGACAGCT TATCATCGAT AAGCT

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