

LOCUS	pDNR221_U6gRNA	5189 bp	DNA	linear	06-APR-2023
FEATURES	Location/Qualifiers				

rep_origin	4..677	/note="ColE1 (pUC-type) origin of replication"
gene	798..1607	/note="kanamycin resistance gene"
misc_feature	1777..1876	/note="attL2"
promoter	1986..2249	/label=hU6_promoter
misc_feature	2252..2257	/label=BbsI
gene	2416..2595	/gene="lacZ"
CDS	2259..2595	/gene="lacZ"
		/note="beta-d-galactosidase"
misc_feature	2617..2622	/label=BbsI(1)
misc_structure	2625..2701	/note="gRNA"
terminator	2702..2707	/note=""
enhancer	2755..3134	/label=CMV enhancer
		/note="human cytomegalovirus immediate early enhancer"
promoter	3135..3382	/label=CMV promoter
		/note="human cytomegalovirus (CMV) immediate early promoter"
CDS	3475..4209	/dnas_title="mMaroon1"
		/codon_start=1
		/product="bright, rapidly maturing, monomeric far-red fluorescent protein (Bajar et al., 2016)"
		/label=mMaroon1
		/translation="MVSKGEELIKENMHTKLYLTGTVNNHYFECTAEEGEGKPYEGTQT NRIKVVVRGGPLPFAFDILAPCFMYGSKTFINHPPDIPDYFKQSFPEGFTWERTTVYED GGTLTATQDTSIQDGLIYNVQVRGENFPSNGPVMQKKTGWEASTETLYPADGSLEG RLDWALKLVGGGHLHCRLETTYRSKKPAKNLKMGPVYFIDRRLERIKEADNETYVEQH EVAVARYCDLPSKLGHLNGMDELYK"
polyA_signal	4248..4472	/label=bGH poly(A) signal
		/note="bovine growth hormone polyadenylation signal"
misc_feature	4522..4621	/note="aatL1"

ORIGIN

1	AACATGTGAG	CAAAAGGCCA	GCAAAGGCC	AGGAACCGTA	AAAAGGCCGC	GTTGCTGGCG
61	TTTTTCCATA	GGCTCCGCCC	CCCTGACGAG	CATCACAAAA	ATCGACGCTC	AAGTCAGAGG
121	TGGCGAAACC	CGACAGGACT	ATAAAGATAC	CAGGCGTTTC	CCCCTGGAAG	CTCCCTCGTG
181	CGCTCTCCTG	TTCCGACCCT	GCCGCTTACC	GGATACCTGT	CCGCTTTTCT	CCCTTCGGGA
241	AGCGTGGCGC	TTTCTCATAG	CTCAGCTGT	AGGTATCTCA	GTTCGGTGTA	GGTCGTTTCG
301	TCCAAGCTGG	GCTGTGTGCA	CGAACCCCC	GTTCAGCCCG	ACCGCTGCGC	CTTATCCGGT
361	AACTATCGTC	TTGAGTCCAA	CCCGGTAAGA	CACGACTTAT	CGCCACTGGC	AGCAGCCACT
421	GGTAACAGGA	TTAGCAGAGC	GAGGTATGTA	GGCGGTGCTA	CAGAGTTCTT	GAAGTGGTGG
481	CCTAACTACG	GCTACACTAG	AAGAACAGTA	TTTGGTATCT	GCGCTCTGCT	GAAGCCAGTT
541	ACCTTCGGAA	AAAGAGTTGG	TAGCTCTTGA	TCCGGCAAAC	AAACCACCGC	TGGTAGCGGT
601	GGTTTTTTTG	TTTGCAAGCA	GCAGATTACG	CGCAGAAAAA	AAGGATCTCA	AGAAGATCCT

661	TTGATCTTTT	CTACGGGGTC	TGACGCTCAG	TGGAACGACG	CGTAACTCAC	GTTAAGGGAT
721	TTTGGTCATG	AGCTTGCGCC	GTCCCGTCAA	GTCAGCGTAA	TGCTCTGCCA	GTGTTACAAC
781	CAATTAACCA	ATTCTGATTA	GAAAAACTCA	TCGAGCATCA	AATGAAACTG	CAATTTATTC
841	ATATCAGGAT	TATCAATACC	ATATTTTTGA	AAAAGCCGTT	TCTGTAATGA	AGGAGAAAAC
901	TCACCGAGGC	AGTTCCATAG	GATGGCAAGA	TCCTGGTATC	GGTCTGCGAT	TCCGACTCGT
961	CCAACATCAA	TACAACCTAT	TAATTTCCCC	TCGTCAAAAA	TAAGGTTATC	AAGTGAGAAA
1021	TCACCATGAG	TGACGACTGA	ATCCGGTGAG	AATGGCAAAA	GTTTATGCAT	TTCTTTCCAG
1081	ACTTGTTCAA	CAGGCCAGCC	ATTACGCTCG	TCATCAAAAT	CACTCGCATC	AACCAAACCG
1141	TTATTCATTC	GTGATTGCGC	CTGAGCGAGA	CGAAATACGC	GATCGCTGTT	AAAAGGACAA
1201	TTACAAACAG	GAATCGAATG	CAACCGGCGC	AGGAACACTG	CCAGCGCATC	AACAATATTT
1261	TCACCTGAAT	CAGGATATTC	TTCTAATACC	TGGAATGCTG	TTTTTCCGGG	GATCGCAGTG
1321	GTGAGTAACC	ATGCATCATC	AGGAGTACGG	ATAAAATGCT	TGATGGTCGG	AAGAGGCATA
1381	AATTCCGTCA	GCCAGTTTAT	TCTGACCATC	TCATCTGTAA	CATCATTGGC	AACGCTACCT
1441	TTGCCATGTT	TCAGAAAACAA	CTCTGGCGCA	TCGGGCTTCC	CATACAAGCG	ATAGATTGTC
1501	GCACCTGATT	GCCCCGACATT	ATCGCGAGCC	CATTTATACC	CATATAAATC	AGCATCCATG
1561	TTGGAATTTA	ATCGCGGCCT	CGACGTTTCC	CGTTGAATAT	GGCTCATAAC	ACCCCTTGTA
1621	TTACTGTTTA	TGTAAGCAGA	CAGTTTTATT	GTTTCATGAT	ATATTATTTT	ATCTTGTGCA
1681	ATGTAACATC	AGAGATTTTG	AGACACGGGC	CAGAGCTGCC	AGGAAACAGC	TATGACCATG
1741	TAATACGACT	CACTATAGGG	GATATCAGCT	GGATGGCAAA	TAATGATTTT	ATTTTGACTG
1801	ATAGTGACCT	GTTCGTTGCA	ACAAATTGAT	AAGCAATGCT	TTCTTATAAT	GCCAACTTTG
1861	TACAAGAAAG	CTGGGTGATG	GCTGGCAACT	AGAAGGCACA	GTCGAGGCTG	ATCAGCGAGC
1921	TCTAGCATTT	AGGTGACACT	ATAGAATAGG	GCCCTCTAGA	TGCATGCTCG	ACTGGATCCG
1981	GTACCAAGGT	CGGGCAGGAA	GAGGGCCTAT	TTCCCATGAT	TCCTTCATAT	TTGCATATAC
2041	GATACAAGGC	TGTTAGAGAG	ATAATTAGAA	TTAATTTGAC	TGTAAACACA	AAGATATTAG
2101	TACAAAATAC	GTGACGTAGA	AAGTAATAAT	TTCTTGGGTA	GTTTGCAGTT	TTAAAATTAT
2161	GTTTTAAAAT	GGACTATCAT	ATGCTTACCG	TAACTTGAAA	GTATTTTCGAT	TTCTTGGCTT
2221	TATATATCTT	GTGGAAAGGA	CGAAACACCG	GGTCTTCGCA	CGACAGGTTT	CCCGACTGGA
2281	AAGCGGGCAG	TGAGCGCAAC	GCAATTAATG	TGAGTTAGCT	CACTCATTAG	GCACCCCAGG
2341	CTTTACACTT	TATGCTTCCG	GCTCGTATGT	TGTGTGGAAT	TGTGAGCGGA	TAACAATTTT
2401	ACACAGGAAA	CAGCTATGAC	CATGATTACG	GATTCACCTG	CCGTCGTTTT	ACAACGTCGT
2461	GACTGGGAAA	ACCCTGGCGT	TACCCAACTT	AATCGCCTTG	CAGCACATCC	CCCTTTCGCC
2521	AGCTGGCGTA	ATAGCGAAGA	GGCCCGCACC	GATCGCCCTT	CCCAACAGTT	GCGCAGCCTG
2581	AATGGCGAAT	GGCGCGAACG	ATATCGTGCG	GATCCAGAAG	ACCTGTTTTA	GAGCTAGAAA
2641	TAGCAAGTTA	AAATAAGGCT	AGTCCGTTAT	CAACTTGAAA	AAGTGGCACC	GAGTCGGTGC
2701	TTTTTTTCTA	GACCCAGCTT	TCTTGTAACA	AGTTGGCATT	AAAGGGCGAA	TTCTGACATT
2761	GATTATTGAC	TAGTTATTAA	TAGTAATCAA	TTACGGGGTC	ATTAGTTCAT	AGCCCATATA
2821	TGGAGTTCCG	CGTTACATAA	CTTACGGTAA	ATGGCCCCGC	TGGCTGACCG	CCCAACGACC
2881	CCCGCCCAT	GACGTCAATA	ATGACGTATG	TTCCCATAGT	AACGCCAATA	GGGACTTTCC
2941	ATTGACGTCA	ATGGGTGGAC	TATTTACGGT	AACTGCCCCA	CTTGGCAGTA	CATCAAGTGT
3001	ATCATATGCC	AAGTACGCCC	CCTATTGACG	TCAATGACGG	TAAATGGCCC	GCCTGGCATT
3061	ATGCCCAGTA	CATGACCTTA	TGGGACTTTC	CTACTTGCCA	GTACATCTAC	GTATTAGTCA
3121	TCGCTATTAC	CATGGTGATG	CGGTTTTGGC	AGTACATCAA	TGGGCGTGGA	TAGCGGTTTG
3181	ACTCACGGGG	ATTTCCAAGT	CTCCACCCCA	TTGACGTCAA	TGGGAGTTTG	TTTTGGCACC
3241	AAAATCAACG	GGACTTTCCA	AAATGTCGTA	ACAACTCCGC	CCCATTGACG	CAAATGGGCG
3301	GTAGGCGTGT	ACGGTGGGAG	GTCTATATAA	GCAGAGCTCT	CTGGCTAACT	AGAGAAACCC
3361	CTGCTTACTG	GCTTATCGAA	ATAGACCCGC	TCGTTGCAAC	AAATTGATGA	GCAATGCTTT
3421	TTTATAATGC	CAACTCTGTA	CAAAAAAGTT	GGCGAGGATC	GAACCCTTGC	CACCATGGTG
3481	AGCAAGGGCG	AGGAGCTGAT	CAAGGAGAAC	ATGCACACCA	AGCTGTACCT	GACAGGCACC
3541	GTGAACAACC	ACTACTTCGA	ATGCACCGCC	GAAGGGGAGG	GCAAGCCCTA	CGAGGGCACC
3601	CAGACCAACA	GGATCAAGGT	GGTGCGCGGA	GGCCCCCTGC	CGTTTCGCATT	CGACATCCTG
3661	CCCCCTGCT	TTATGTACGG	GAGCAAGACC	TTCATTTAACC	ATCCACCTGA	CATTCCCGAT
3721	TATTTTAAGC	AGTCCTTCCC	TGAGGGCTTC	ACATGGGAGA	GAACCACCGT	TTACGAAGAT
3781	GGGGGCACAC	TCACTGCTAC	ACAGGACACC	AGCCTCCAGG	ACGGCTGCCT	GATCTACAAC
3841	GTCCAAGTCA	GAGGGGAGAA	CTTCCCATCC	AACGGCCCTG	TGATGCAGAA	GAAAACACTC
3901	GGCTGGGAGG	CCAGTACCGA	GACCCTGTAC	CCCGCTGACG	GCAGCCTGGA	AGGCAGACTG
3961	GACTGGGCCC	TGAAGCTCGT	GGGCGGGGGC	CACCTGCACT	GCAGACTGGA	AACCACATAC
4021	AGATCCAAGA	AACCCGCAAA	GAACCTCAAG	ATGCCCGGCG	TCTATTTTAT	TGACAGGAGA
4081	CTGGAAAGAA	TCAAGGAGGC	CGACAATGAG	ACCTACGTCG	AGCAGCACGA	GGTGGCTGTG
4141	GCCAGATACT	GCGACCTCCC	TAGCAAACCTG	GGGCACAAAC	TTAATGGCAT	GGACGAGCTG
4201	TACAAGTAAT	CTAGAGGGCT	ATGCTAGAGC	TCGCTGATCA	GCCTCGACTG	TGCCTTCTAG

4261	TTGCCAGCCA	TCTGTTGTTT	GCCCCCTCCC	CGTGCCTTCC	TTGACCCTGG	AAGGTGCCAC
4321	TCCCACGTGC	CTTTCCTAAT	AAAATGAGGA	AATTGCATCG	CATTGTCTGA	GTAGGTGTCA
4381	TTCTATTCTG	GGGGGTGGGG	TGGGGCAGGA	CAGCAAGGGG	GAGGATTGGT	AAGACAATAG
4441	CAGGCATGCT	GGGGATGCGG	TGGGCTCTAT	GGCTTCTGAG	GCGGAAAGAA	CCAGCAAGCT
4501	TGGGTCTCCC	TATAGTGAGT	CAGCCTGCTT	TTTTGTACAA	AGTTGGCATT	ATAAAAAAGC
4561	ATTGCTCATC	AATGTGTTGC	AACGAACAGG	TCACTATCAG	TCAAAATAAA	ATCATTATTT
4621	GGGGCCCCGAG	CTTAAGACTG	GCCGTCGTTT	TACAACGTCG	TGACTGGGAA	AACATCCATG
4681	CTAGCGTTAA	CGCGAGAGTA	GGGAACTGCC	AGGCATCAAA	TAAAACGAAA	GGCTCAGTCG
4741	GAAGACTGGG	CCTTTCGTTT	TATCTGTTGT	TTGTCGGTGA	ACGCTCTCCT	GAGTAGGACA
4801	AATCCGCCGG	GAGCGGATTT	GAACGTTGTG	AAGCAACGGC	CCGGAGGGTG	GCGGGCAGGA
4861	CGCCCGCCAT	AAACTGCCAG	GCATCAAAC	AAGCAGAAGG	CCATCCTGAC	GGATGGCCTT
4921	TTTGCGTTTC	TACAAACTCT	TCCTGGCTAG	CGGTACGCGT	ATTAATTGCG	TTGCGCTCAC
4981	TGCCCGCTTT	CCAGTCGGGA	AACCTGTCGT	GCCAGCTGCA	TTAATGAATC	GGCCAACGCG
5041	CGGGGAGAGG	CGGTTTGCGT	ATTGGGCGCT	CTTCCGCTTC	CTCGCTCACT	GACTCGCTGC
5101	GCTCGGTCGT	TCGGCTGCGG	CGAGCGGTAT	CAGCTCACTC	AAAGGCGGTA	ATACGGTTAT
5161	CCACAGAATC	AGGGGATAAC	GCAGGAAAG			

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