

Product datasheet for **MC222548**

Gen1 (NM_177331) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gen1 (NM_177331) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Gen1
Synonyms:	5830483C08Rik
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC222548 representing NM_177331
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAGTGAATGACTTATGGCAAATTCTAGAGCCTGTAAGCAACATATCCACTTGCAAGATCTTAGTG
 GAAAACCATGCGGTTGATTTGAGTCTCTGGGTATGCGAGGCACAGACAGTGAAGAAAATGATAGGAAC
 TGCAAGAAGCCCCACCTCAGGAACCTATTTTTTCGATTTTCATATTTAACTCAAATGAATGTAATACTG
 GTGTTTGAATGGAAGGGGAGCCACCAATGCTGAAAGCTGATGTCATAAGCAAGAGGACTCAGACTCGTT
 ACGGGCCTTCTGAAAAATCAAGTCTCAGAAAACAGGGAGATCACATTTTAAAGTCACTTACGAGAGTG
 CCTTGAATGCTCGAGTGCCTGGGAATGCCCTGGGTCCAGGCCGCGGGGAAGCTGAGGCCATGTGTGCT
 TACCTTAATGCCAGTGGCCATGTGGATGGCTGCCTACCAACGACGGCGATGCTTTCCTTATGGAGCCC
 AGACTGTTACAGAAAATTCACGATGAACACAAAGGATCCCCATGTTGACTGTTACACGATATCATCTAT
 CAAGAGTAAGCTAGGCTGGATCGAGACGCTCTGGTTGGACTGGCCGTACTTCTGGGTTGTGATTACCTT
 CCAAAGGAGTGCCTGGAGTTGGAAGGAACAAGCATTAAAACTTTTGCAGATTTTCAAAGGTCAAAGTT
 TGCTTCAGAGGTTTAAACCAGTGGATTGAAGACCCTTGCTACTCTGTTCCACAATCAGCACAAAAAAGT
 GGTTCACTGCTCTGTGTGTTCCACCCAGGTTCCGCAAAGGATCATGAACGTAATGGATGCATATTATGT
 AAAAGTGATAAATACTGTGAACCACATGATTATGATTACCTCTGCCCTTGTGAATGGCATCAGACAGACC
 ATAATAGGCATCTAAGTGAATAGAAAACAATATTAAGAAAGAAAGCTTGCAGTTGCGAAGGATTTCCATT
 CCATGAGGTCATCCAAGATTCCTTTTGAATAAGAATAAAATGTTGAAACCGATCACATACCAAAGACCT
 GATTTATTATTGTTTTCAGAGATTTACTGTTCAAAAAATGGAGTGGCCAGTCACTATGCAATGTGAAAAAT
 TGTGGTGCCTTTGACCCGCTATGACATGATAGAAAAGAAAACATGGTAGAAAAGACCTCAAATCAACTACA
 GCCAATTAGAATTGTTAAACCCCGAGTCAGAAAATGGAGTCCATTGTCTTGAATAGAATGGGAAAAGCCT
 GAACATTATGTGGTGAAGATGGAGACCCTGGAAGAACTGAGCCTCCTTACAATGGAAGAAGCGTCCCTGT
 TTGAAGCAGCCTATCCTGATGCTGTGGTGTCTACCAGAAACAGCTGTCAGAGACCAAAGGAAGGAAACA
 GAAAAGTATGAAAAATAAGCCTAAAGGAAGCCATTTACCGGAAGCAGATGATGTGATCAATTCTCAGTCA
 CTTATGACTTTAAACCTACATCTAAAGCCTTCCCAAGCAAAATCCCAAAATTAATTTGAAAAATCTC
 CAGATCCTATTTAGCACAGGAATCTACTTCCCCTCATTGAATAGTTTTGTTCCCTGAAAAATGCTCC
 CTGTTTGAATTTACAAGAACAGTTAGTGCCATCTCCAGAACTTTGGCTATAAAGCAAAGTAAAGATGTC
 AGTCATTTTCTAGTTTTCAGAATGTAGTCAGCCAGCTCTTCTCCATGACATCTCTGTGATTACTGATC
 TGCAGTTGAGTACCATTGATTGGGCGGGTACTTCTTTAGTAATTCCTCAGCAGTTCAAAGAAACACTTT
 CTCTCAAGACTTAGCATCAGAATCTGAGTCATCGGCCATCCTTCTGACTTTGAACAGCTGTGATATGAA
 TCAGAACAAGGGACCTCAGACAGTGAAGGGTCCGGTAGAGACCTTCAAGCAGCAACCTGAAGAGCAGC
 TCCTTTCTGGCATCAGTGCTTTACATCTTCATGATTTGCCTCTAAAGAAAGAATACGTATCAAATCTTC
 ATGCCCTCAGTATAATGTAGGAGCAGATGCTGGCTGGAAGTTTGCCTTAAATTTGAAAGGCTCTTGT
 ATTGCTTACAGTAGCTCTGATGGCTCATCCAATTTTTCAAAGGATCTTACAGGGGTATATCTTCACAAAG
 AGTCCAGAAACTCTAAAGTTCTAGACAGCCGACTCCAAGAAAACGCGGGGCGAATACTTCTTACCTTA
 TTCTTTTCAAGTACAAAGCAGTAAAGACTTCCAGTCTTCAAGTTGGGCTGCCAACTGCTGCTATACCTCAT
 AATCCAAGAGTTGCTGTGAAAACACTAAGAACCTTGTGATGAAGAATAGTGTTCCTCGAGAGAGATT
 CCTCAGATGAAGACAATGCTCCAGGTCCTGGAATCAAAGTATACTGCTCCAGAATGAAACACAGTTC
 TCAGAAGCACAGCCTAGTCCATGTGAGACAGTACTCACAACAAACTCAGAAATCCTAAAGTGAATCT
 AAAGAAACCAAAGTGTGTAATGAGTCTTTTAAACAGCTGAAGATGAAGAAAACGGGTTCTCAGATCTAG
 GGAGAAGTCTCAGAGTTTTGACCATGTGATGACAAAGATGAGAAGTCTACTGCCTCCTGGGAAAATCC
 TCTACCTTACGCCAGAGGTTAAACTCAGGTTCCAGAACTCAAAGTGGATTTTATAACT**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul
ACCN: NM_177331

Insert Size:	2727 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_177331.4 , NP_796305.3
RefSeq Size:	3302 bp
RefSeq ORF:	2727 bp
Locus ID:	209334
UniProt ID:	Q8BMI4
Cytogenetics:	12 A1.1
Gene Summary:	Endonuclease which resolves Holliday junctions (HJs) by the introduction of symmetrically related cuts across the junction point, to produce nicked duplex products in which the nicks can be readily ligated. Four-way DNA intermediates, also known as Holliday junctions, are formed during homologous recombination and DNA repair, and their resolution is necessary for proper chromosome segregation. Cleaves HJs by a nick and counter-nick mechanism involving dual coordinated incisions that lead to the formation of ligatable nicked duplex products. Cleavage of the first strand is rate limiting, while second strand cleavage is rapid. Largely monomeric, dimerizes on the HJ and the first nick occurs upon dimerization at the junction. Efficiently cleaves both single and double HJs contained within large recombination intermediates. Exhibits a weak sequence preference for incision between two G residues that reside in a T-rich region of DNA. Has also endonuclease activity on 5'-flap and replication fork (RF) DNA substrates.[UniProtKB/Swiss-Prot Function]