

Product datasheet for **MR218623**

Gen1 (NM_177331) Mouse Tagged ORF Clone

Product data:

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



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ORF Nucleotide Sequence:

>MR218623 representing NM_177331
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGAGTGAATGACTTATGGCAAATTCTAGAGCCTGTAAGCAACATATCCACTTGCAAGATCTTAGT
 GAAAACCATGCGTTGATTTGAGTCTCTGGGTATGCGAGGCACAGACAGTGAAGAAAATGATAGGAAC
 TGCAAGAAGCCCCACCTCAGGAACCTATTTTTTCGATTTTCATATTTAACTCAAATGAATGAAAACTG
 GTGTTTGAATGGAAGGGGAGCCACCAATGCTGAAAGCTGATGTCATAAGCAAGAGGACTCAGACTCGTT
 ACGGGCCTTCTGAAAAATCAAGTCTCAGAAAACAGGGAGATCACATTTAAGTCAGTCTTACGAGAGTG
 CCTTGAATGCTCGAGTGCCTGGGAATGCCCTGGGTCCAGGCCGCGGGGAAGCTGAGGCCATGTGTGCT
 TACCTTAATGCCAGTGGCCATGTGGATGGCTGCCTACCAACGACGGCGATGCTTTCCTTATGGAGCCC
 AGACTGTTACAGAAATTCACGATGAACACAAAGGATCCCCATGTTGACTGTTACACGATATCATCTAT
 CAAGAGTAAGCTAGGCTTGGATCGAGACGCTCTGGTTGGACTGGCCGTACTTCTGGGTTGTGATTACCTT
 CCAAAGGAGTGCCTGGAGTTGGAAGGAACAAGCATTAAAACTTTTGCAGATTTTCAAAGGTCAAAGTT
 TGCTTCAGAGTTTAAACCAGTGGATTGAAGACCCTTGCTACTCTGTTCCACAATCAGCACAAAAAAGT
 GTTCACTGCTCTGTGTGTTCCACCCAGGTTCCGCAAAGGATCATGAACGTAATGGATGCATATATGT
 AAAAGTGATAAACTGTGAACCACATGATTATGATTACCTCTGCCCTTGTGAATGGCATCAGACAGACC
 ATAATAGGCATCTAAGTGAATAGAAAACAATATTAAGAAAGCTTGCAGTTGCGAAGGATTTCCATT
 CCATGAGGTCATCCAAGATTCCTTTTGAATAAGAATAAAATGTTGAAACCGATCACATACCAAAGACCT
 GATTTATTATTGTTTTCAGAGATTTACTGTTCAAAAAATGGAGTGGCCAGTCACTATGCATGTAAAAAT
 TGTGGTGTCTTTGACCCGCTATGACATGATAGAAAAGAAAACATGGTAGAAAAGACCTCCAATCAACTACA
 GCCAATTAGAATTGTTAAACCCCGAGTCAGAAATGGAGTCCATTGTCTTGAATAGAATGGGAAAAGCCT
 GAACATTATGTGGTGAAGATGGAGACCCTGAAAACTGAGCCTCCTTACAATGGAAGAAGCGTCCCTGT
 TTGAAGCAGCCTATCCTGATGCTGTGGTGTCTACCAGAAACAGCTGTCAGAGACCAAAGGAAGGAAACA
 GAAAAGTATGAAAAATAAGCCTAAAGGAAGCCATTTACCGAAGCAGATGATGTGATCAATTCTCAGTCA
 CTTATGACTTTAAACCTACATCTAAAGCCTCCCAAGCAAAATCCCAAAATTAATTTGAAAAATCTC
 CAGATCCTATTTAGCACAGGAATCTACTCCCCCTCATTGAATAGTTTTGTTCCCTGAAAAATGCTCC
 CTGTTTGAATTTACAAGAACAGTTAGTGCCATCTCCAGAACTTTGGCTATAAAGCAAAGTAAAGATGTC
 AGTCATTTTCTAGTTTTCAGAATGTAGTCAGCCAGCTCTTCTCCATGACATCTCTGTGATTACTGATC
 TGCAAGTGGAGTACCATTGATTGGGCGGGTACTTCTTTTAGTAATCTCCAGCAGTTCAAAGAAACACTTT
 CTCTCAAGACTTAGCATCAGAATCTGAGTCATCGGCCATCCTTCTGACTTTGAACAGCTGTATATGAA
 TCAGAACAAGGGACCTCAGACAGTGAAGGGTCCGGTAGAGACCTTCCAGCAGAGCAACCCTGAAGAGCAGC
 TCCTTTCTGGCATCAGTGCTTTACATCTTCATGATTTGCCTCTAAAAGAAAGAATACGTATCAAATCTTC
 ATGCCCTCAGTATAATGTAGGAGCAGATGCTGGCTGGAAGTTTGGCCCTAAAATTTGAAAGGCTCTTGT
 ATTGCTTACAGTAGCTCTGATGGCTCATCCAATTTTTCAAAGGATCTTACAGGGGTATATCTTCACAAAG
 AGTCCAGAACTCTAAAGTTCTAGACAGCCGACTCCAAGAAAACGCGGGGCGAATACTTCTTACCTTA
 TTCTTTTCAGTGACAAAGCAGTAAAGACTTCCAGTCTTCAAGTTGGGCTGCCAACTGCTGCTATACCTCAT
 AATCCAAGAGTTGCTGTGAAAACCTACTAAGAACCTTGTGATGAAGAATAGTGTTCCTCGAGAGAGATT
 CCTCAGATGAAGACAATGCTCCAGGTCCTGGAATCAAAGTATACTGCTCCAGAATGAAACACAGTTC
 TCAGAAGCACAGCCTAGTCCATGTGAGACAGTACTCACAACAACTCAGAAATCCTAAAGTGGAACTCT
 AAAGAAACCAAAGTGTGTAATGAGTCTTTTAAACAGCTGAAGATGAAGAAAACGGGTTCTCAGATCTAG
 GGAGAAGTCTCAGAGTTTTGACCATGTGATGACAAAGATGAGAACTCTACTGCCTCCTGGAAAAATCC
 TCTACCTTACGCCAGAGGTTAAAACCTCAGGTTCCAGAACACTCAAAGTGGATTTTATAACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR218623 representing NM_177331
 Red=Cloning site Green=Tags(s)

MGVNDLWQILEPVKQHIHLQDLSGKTIIVDL SLWVCEAQTVKKMIGTVKKPHLRNLFRRISYLTQMNVKL
 VFVMEGEPMLKADVISKRTQTRYGSPGKSRSQKTGRSHFKSVLRECLEMLECLGMPWVQAAGEAEAMCA
 YLNASGHVDGCLTNDGDAFLYGAQTVYRNFTMNTKDPHVDCYTISSIKSLGLDRDALVGLAVLLGCDYL
 PKGVPGVGKEQALKLLQIFKQSLLRFRNQWIEDPCYSVPOQSAPKKVVHCSVCSHPGSPKDHENGCILC
 KSDKYCEPHDYDYLCPCEWHQTDHNRHLSEIENNIKKKACSCGFFHEVIQEFLLNKNKMLKPITYQRP
 DLLLFQRFVTVQKMEWPSHYACEKLLVLLTRYDMIERKHGRKTSNQLQPIRIVKPRVRNGVHCLEIEWEKP
 EHYVVEDGDPGKLSLLTMEASLFEAAYPDAVAVYQKQLSETKGRKQKSMKNPKGSHLPEADDVINSQS
 LMTLKPTSKAFFPKQNPKNLENPDPILAQESTSPSLNSFVSPENAPCLNLQEQLVSPRTLAIKQSKDV
 SHFLVSECSQPSSSSHDISVITDLQLSTIDWAGTSFSNSPAVQRNTFSQDLASESSAILPDFEQLSYE
 SEQGTSDESGRDLQSNPEEQLLSGISALHLHDLPLKERIRIKSSCPQYNVGADAGLESPLKLGKSC
 IAYSSSDGSSNFSKDLTGVYLHKESRNSKVLDSRLQENCGANTSLPYSFSDKAVKTSSELQVGLPTAAIPH
 NPRVAVKTTKNLVMKNSVCLERDSSDEDNAPGSWKSKYTAPEMKHSSQKHSLVHVRDSTHNKLRNPKVES
 KETKLCNESFKTAEDEENGFSDLGRSPQSFPRCHDKDENSTASWENPLPLRQLKLRQNTQSGFYNT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9039_e08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

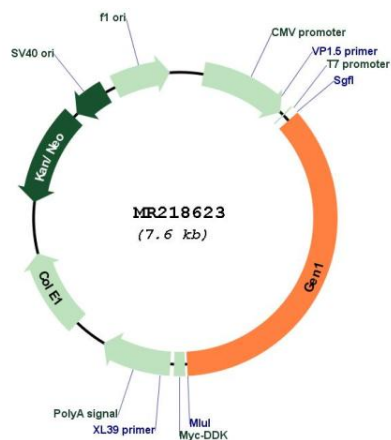


* The last codon before the Stop codon of the ORF

ACCN: NM_177331

ORF Size:	2724 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
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_177331.5
RefSeq Size:	3302 bp
RefSeq ORF:	2727 bp
Locus ID:	209334
UniProt ID:	Q8BMI4
Cytogenetics:	12 A1.1
MW:	102.2 kDa
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]

Product images:



Circular map for MR218623