

## Product datasheet for MR218117

### Msh3 (NM\_010829) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Msh3 (NM_010829) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Msh3
Synonyms:	D13Em1; Rep-3; Rep3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR218117 representing NM_010829 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCCGCGGAAATCCGCGTCGGGAGGCTCTACTGCCCGCGCCAGGCCCGGGAGGCAAACGGTTC  
TAAGCCGGTTCCTCAGGCTGCGGGAAGCCTAAGATCCAGCGCTCTCCACGGAGCCAGCAGAGAAGGT  
GACAGAAGGTGACAGCAGGAAGAGGTCACTGGGAAATGGTGGGCCACTAAGAAAAAGCAAGGAAAGTT  
CCAGAGAAGGAGGAAGAAACATCTCAGTAGCAGCTCACACCCTGAGGCAAAGAAATGTCTGAGCCCA  
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CCAGACAGAAGCTCTTCGGGAGAGACTTGAAGTTCTGCCAAGGTGTACTGATTTTGAAGATCACTCTG  
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GACCCTGCCCTGAAGTTTTCCAGAAGACTTCCGATTGTAAACCTTTTAAACAAGCGATCCAAGAGCGTCTA  
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CAAAGGGTACAAGGTGGGAGTTGTGAAGCAAACGAACTGCCGATTAAGGCCATCGGAGACAATAAA  
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GTGTATCTACGAAGAAAAGGAGAACATTAAGACAAAAAGAGGGAAACCTTTCGGTTGGTATCGTGGGA  
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GAATTCATGAGAATTAATGGGACCACGCTAAGGAATCTGGAGATCCTTCAGAATCAGACTGATATGAAGA  
 CCAAAGGAAGCTTGGTTTGGGTTTGTAGACCACACTAAAACCTTCATTTGGGAGAAGGAAGTTAAAGAATTG  
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 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR218117 representing NM\_010829  
 Red=Cloning site Green=Tags(s)

MPRGKSASGGSTAAGPGPGRQTVLSRFFRSAGSLRSSASSTEPAEKVTEGDSRKRSLGNGGPTKKKARKV  
 PEKEEENISVAHHPEAKKCLRPRIVLKSLEKLEKFCDSALPQNRVQTEALRERLEVLPRCTDFEDITL  
 QRAKNAVLSEDSKQANQKDSQFGPCPEVFQKTSCKPFNKRSKSVYTPLELQYLDMMQKHDAVLVCEC  
 GYKYRFFGEDAEIAARELNIIYCHLDHNFMTASIPHRLFVHVRRLVAKGYKVGKVTETAALKAIGDNK  
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 SESSVFEQIENLLRKLDPVERGLCSIIYHKCSTQEFFLIVKSLCQLKSELQALMPAVNSHVQSDLLRALI  
 VEAPPELLSPVEHYLKVNLGPAKVGDKTELFDLSDFPILIKRKNEIQEVIHSIQMLQEFRKILKLPSL  
 QYVTVSQEFMIEIKNSAVSIPADWVKVGSTKAVSRFHPPFIVESYRRLNQLREQLVLDCAEWLGFLE  
 NFGHEHYHTLCKAVDHLATVDCIFSLAKVAKQGNCRPTLQEEKIIKNGRHPMIDVLLGEQDQFVNST  
 SLSQDSERVMIITGPNMGGKSSYIKQVALVTIMAQIGSYVPAEEATIGIVDGIFTRMGAADNIYKGRSTF  
 MEELTDTAEIIRRASPQSLVILDELGRGTSTHDGIAIAYATLEYFIRDVKSLLTFVTHYPPVCELEKCY  
 EQVGNHYMGFLVNEDESKQDSGDMEQMPDSVTFLYQITRGIAAARSYGLNVAKLADVPREVLQKAAHKSKE  
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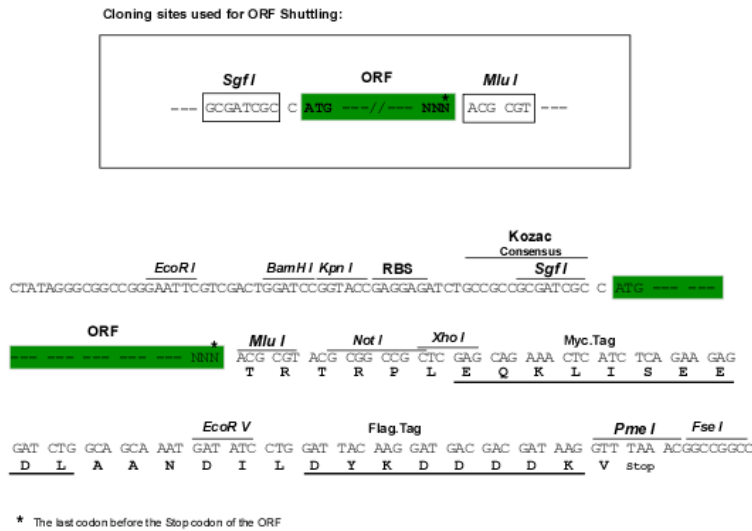
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mm9040\\_a08.zip](https://cdn.origene.com/chromatograms/mm9040_a08.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_010829

ORF Size: 3285 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:

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\\_010829.2](#), [NP\\_034959.2](#)

RefSeq Size: 3945 bp

RefSeq ORF: 3288 bp

Locus ID: 17686

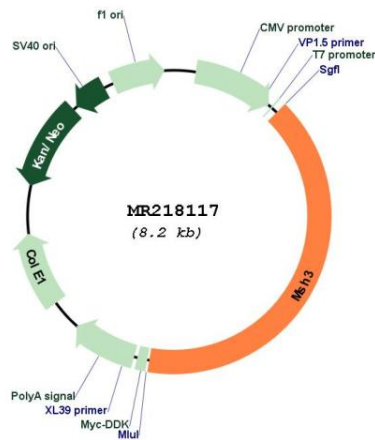
UniProt ID: [P13705](#)

Cytogenetics: 13 47.63 cM

MW: 123.9 kDa

**Gene Summary:** Component of the post-replicative DNA mismatch repair system (MMR). Heterodimerizes with MSH2 to form MutS beta which binds to DNA mismatches thereby initiating DNA repair. When bound, the MutS beta heterodimer bends the DNA helix and shields approximately 20 base pairs. MutS beta recognizes large insertion-deletion loops (IDL) up to 13 nucleotides long. After mismatch binding, forms a ternary complex with the MutL alpha heterodimer, which is thought to be responsible for directing the downstream MMR events, including strand discrimination, excision, and resynthesis (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR218117