

Product datasheet for **RC401439**

MSH6 (NM_000179) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	MSH6 (NM_000179) Human Mutant ORF Clone
Mutation Description:	R911X
Affected Codon#:	911
Affected NT#:	2731
Nucleotide Mutation:	MSH6 Mutant (R911X), Myc-DDK-tagged ORF clone of Homo sapiens mutS homolog 6 (E. coli) (MSH6) as transfection-ready DNA
Effect:	Endomeril ner
Symbol:	MSH6
Synonyms:	GTBP; GTMBP; HNPCC5; HSAP; MMRCS3; p160
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000179
ORF Size:	2730 bp
Restriction Sites:	Sgfi-Mlul



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ORF Nucleotide Sequence:

>RC401439 representing NM_000179
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCGCGACAGAGCACCTGTACAGCTTCTTCCCAAGTCTCCGGCGCTGAGTGATGCCAACAAAGCGCT
 CGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGCTGCCCGGGGGCCTCTCCTTCCCAAGCGGGGA
 TCGGCCCTGGAGCGAGGCTGGGCCTGGGCCAGGCCCTTGGCGCGCTCCGCGTACCCGCCAAGGCGAAG
 AACCTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGCTGCCCCACCAGTTGTGACTTCTCACCAGGAG
 ATTTGGTTTGGGCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGTTTACAACCACCCCTTTGATGG
 AACATTCATCCGCGAGAAAGGAAATCAGTCCGTGTTTACATGTACAGTTTTTTGATGACAGCCCAACAAGG
 GGCTGGGTTAGCAAAGGCTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAGGGAGGTC
 ATTTTACAGTGCAAAGCCTGAAATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAA
 GATTAAGAGGCTTGAATTGGCAGTTTGTGATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTA
 GGCACAACCTTACGTAACAGATAAGAGTGAAGAAGATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTA
 AGACACAAAGGATCTAGGCGAAGTAGCCGCCAAATAAAAAACGAAGGGTCAATATCAGATTCTGAGAGTGA
 CATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAGGAAGGAAGCAGTGATGAAATAAGCAGT
 GGAGTGGGGGATAGTGAGAGTGAAGGCCTGAACAGCCCTGTCAAAGTTGCTCGAAAGCGGAAGAGAATGG
 TGACTGGAAATGGCTCTTTAAAAGGAAAAGCTCTAGGAAGGAAAACGCCCTCAGCCACCAAAACAAGCAAC
 TAGCATTTTCATCAGAAACCAAGAATACTTTGAGAGCTTCTCTGCCCTCAAATTTCTGAATCCCAAGCC
 CAGCTTAGTGGAGGTGGTATGACAGTAGTCCCTACTGTTTGGTATCATGAACTTTAGAATGGCTTA
 AGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGGCCTGATCACCCGATTTTGTGATGCATCTACACTGA
 TGTGCCTGAGGATTTCTCAATTCCTGTACTCCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAAC
 TTTGATCTGTATCTGTTACAAGTGGGAAATTTTATGAGCTGTACCACATGGATGCTCTTATTGGAG
 TCAGTGAAGTGGGGCTGGTATTCATGAAAGGCAACTGGGCCATTCTGGCTTTCCTGAAATTCATTTGG
 CCGTTATTCAGATTCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGGAAACAGACTGAGACTCCAGAA
 ATGATGGAGGCACGATGTAGAAAGATGGCACATATATCCAAGTATGATAGAGTGGTGGAGGGGAGATCT
 GTAGGATCATTACCAAGGTACACAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAA
 GTATCTTCTTAGCCTCAAAGAAAAGAGGAAGATCTTCTGGCCATACTCGTGCATATGGTGTGTGCTTT
 GTTGATACTTCACTGGGAAAGTTTTTCATAGTCAAGTTTTCAGATGATCGCCATTGTTTCGAGATTTAGGA
 CTCTAGTGGCACACTATCCCCAGTACAAGTTTTATTTGAAAAAGGAAATCTCTCAAAGGAAACTAAAAC
 AATTCTAAAGAGTTCATTGTCCTGTTCTCTTCAGGAAGGTCTGATACCCGGCTCCAGTTTTGGGATGCA
 TCCAAAACCTTTGAGAACTCTCCTTGAGGAAGAATTTTTAGGGAAAAGCTAAGTATGGCATTGGGGTGA
 TGTTACCCAGGTGCTTAAAGGTATGACTTCAGAGTCTGATTCCATTGGGTTGACACCAGGAGAGAAAAG
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 CTATCTCACCAAAGCCTATCAACGAATGGTGTGCTAGATGCAGTGACATTAACAACCTGGAGATTTTTCT
 GAATGGAACAAATGGTTCTACTGAAGGAACCTACTAGAGAGGGTTGATACTTGCATATCTCCTTTTGGT
 AAGCGGCTCCTAAAGCAATGGCTTTGTGCCCACTCTGTAAACCATTATGCTATTAATGATCGTCTAGATG
 CCATAGAAGACCTCATGGTTGTGCCTGACAAAATCTCCGAAGTTGTAGAGCTTCTAAAGAAGCTTCCAGA
 TCTTGAGAGGCTACTCAGTAAAATTCATAATGTTGGGTCTCCCTGAAGAGTCAAGAACCCAGACAGC
 AGGGCTATAATGTATGAAGAACTACATACAGCAAGAAGAAGATTATTGATTTTCTTCTGCTCTGGAAG
 GATTCAAAGTAATGTGTAATTTATAGGGATCATGGAAGAAGTTGCTGATGGTTTTAAGTCTAAAATCCT
 TAAGCAGGTATCTCTGCAGACAAAAATCCTGAAGTCGTTTTCTGATTTGACTGTAGAATTGAAC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC401439 representing NM_000179
Red=Cloning site Green=Tags(s)

MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSGGDAAWSEAGPGRPLARSASPPKAK
 NLNGGLRRSVAPAAPTSCDFSPGDLVWAKMEGYPWWPCLVYNHPFDGTFIREKKGKSVRVHVQFFDDSPTR
 GWVSKRLLKPYTGSKSKEAQKGGHFYSAKPEILRAMQRADEALNKDKIKRLELAVCDEPSEPEEEEEEMEV
 GTTYVTDKSEEDNEIESEEEVQPKTQGSRRSSRQIKRRRVIDSESDIGGSDVEFKPDTKEEGSSDEISS
 GVGDSSEGLNSPVKVARRRKRMVTGNGSLKRRSSRKETPSATKQATSISSETKNTRAFSAPQNSESA
 HVSGGGDDSSRPTVWYHETLEWLKEEKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQN
 FDLVICYKVGKFYELYHMDALIGVSELGLVFMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPE
 MMEARCRKMAHISKYDRVVRREICRIITKGTQTYSVLEGDPSENYSKYLLSLKEKEEDSSGHTRAYGVCF
 VDTSLGKFFIGQFSDDRHCSRFRTLVAHYPPVQVLFKGNLSKETKTKILKSSLSLQGLIPGSQFWD
 SKTLRLLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGEKSELALSALGGCVFYLLKCLIDQEL
 LSMANFEEYIPLDSDTVSTTRSGAIFTKAYQRMVLDVATLNNLEIFLNGTNGSTEGTLLEKRVDTCHTPFG
 KRLLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKIHNVGSPLKSQNHPS
 RAIMYEETTSKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVIVSLQTKNPEGRFPDLTVELN

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

Cloning Scheme:



OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.
	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).
RefSeq:	NP_000170
RefSeq Size:	2730 bp
RefSeq ORF:	4083 bp
Locus ID:	2956
Cytogenetics:	2p16.3
Domains:	PWWP, MutS_V, MutS_I, MutS_III, MutS_II, MutS_IV
Protein Families:	Druggable Genome, Stem cell - Pluripotency
Protein Pathways:	Colorectal cancer, Mismatch repair, Pathways in cancer
MW:	100.1 kDa
Gene Summary:	This gene encodes a member of the DNA mismatch repair MutS family. In E. coli, the MutS protein helps in the recognition of mismatched nucleotides prior to their repair. A highly conserved region of approximately 150 aa, called the Walker-A adenine nucleotide binding motif, exists in MutS homologs. The encoded protein heterodimerizes with MSH2 to form a mismatch recognition complex that functions as a bidirectional molecular switch that exchanges ADP and ATP as DNA mismatches are bound and dissociated. Mutations in this gene may be associated with hereditary nonpolyposis colon cancer, colorectal cancer, and endometrial cancer. Transcripts variants encoding different isoforms have been described. [provided by RefSeq, Jul 2013]