

## Product datasheet for **RC401426**

### 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:	T764N
Affected Codon#:	764
Affected NT#:	2291
Nucleotide Mutation:	MSH6 Mutant (T764N), Myc-DDK-tagged ORF clone of Homo sapiens mutS homolog 6 (E. coli) (MSH6) as transfection-ready DNA
Effect:	Colorel ner, non-polyposis
Symbol:	MSH6
Synonyms:	GTBP; GTMBP; HNPCC5; HSAP; MMRC3; p160
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000179
ORF Size:	4080 bp
Restriction Sites:	Sgfl-Mlul
ORF Nucleotide Sequence:	>RC401426 representing NM_000179 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCGGACAGAGCACCTGTACAGCTTCTTCCCAAGTCTCCGGCGCTGAGTGATGCCAACAAGGCCT  
CGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGCTGCCCCGGGGCCTCTCCTTCCCAAGCGGGGA  
TGCGGCCTGGAGCGAGGCTGGGCCTGGGCCAGGCCCTTGGCGCGCTCCGCGTACCGCCCAAGCGAAG  
AACCTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGCTGCCCCACCAGTTGTGACTTCTACCAGGAG  
ATTTGGTTTGGCCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGGTTTACAACCACCCCTTTGATGG  
AACATTATCCGCGAGAAAGGAAATCAGTCCGTGTTTCATGTACAGTTTTTTGATGACAGCCCAACAAGG  
GGCTGGGTTAGCAAAGGCTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAGGGAGGTC



[View online »](#)

ATTTTACAGTGCAAAGCCTGAAATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAA  
 GATTAAGAGGCTTGAATTGGCAGTTTGTGATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTA  
 GGCACAACCTACGTAACAGATAAGAGTGAAGAAGATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTA  
 AGACACAAGGATCTAGGCGAAGTAGCCGCCAAATAAAAAACGAAGGGTCATATCAGATTCTGAGAGTGA  
 CATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAGGAAGGAAGCAGTGTGAAATAAGCAGT  
 GGAGTGGGGGATAGTGAAGTGAAGGCCTGAACAGCCCTGTCAAAGTTGCTCGAAAGCGGAAGAGAATGG  
 TGACTGGAAATGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCAGCCACCAACAAGCAAC  
 TAGCATTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTCTGCCCTCAAATTTCTGAATCCCAAGCC  
 CACGTTAGTGGAGGTGGTGTGACAGTAGTCGCCCTACTGTTTGGTATCATGAACTTTAGAATGGCTTA  
 AGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGGCTGATCACCCGATTTTGTGATCTACACTCTA  
 TGTGCCTGAGGATTTCTCAATTCTTGTACTCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAAC  
 TTTGATCTTGTGATCTGTTACAAGTGGGAAAATTTATGAGCTGTACCACATGGATGCTCTATTGGAG  
 TCAGTGAAGTGGGCTGGTATTCATGAAAGGCAACTGGGCCATTCTGGCTTCTGAAATTGCATTTGG  
 CCGTTATTCAGATTCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGAACAGACTGAGACTCCAGAA  
 ATGATGGAGGCACGATGTAGAAAGATGGCACATATATCCAAGTATGATAGAGTGGTGGAGAGGAGATCT  
 GTAGGATCATTACCAAGGTACACAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAA  
 GTATCTTCTTAGCCTCAAAGAAAAGAGGAAGATTCTTCTGGCCATACTCGTGCATATGGTGTGTGCTTT  
 GTTGATACTTCACTGGGAAAGTTTTTCATAGGTCAGTTTTCAGATGATCGCCATTGTTTCGAGATTTAGGA  
 CTCTAGTGGCACACTATCCCCAGTACAAGTTTTATTTGAAAAAGGAAATCTCTCAAAGGAACTAAAAC  
 AATTCTAAAGAGTTCATTGTCTGTCTCTTCCAGGAAGTCTGATACCCGGCTCCAGTTTTGGGATGCA  
 TCCAAAACCTTTGAGAAGTCTCCTTGAGGAAGAATTTTAGGGAAAAGCTAAGTATGGCATTGGGGTGA  
 TGTTACCCAGGTGCTTAAAGGATGACTTCAGAGTCTGATCCATTGGGTTGACACCAGGAGAGAAAAG  
 TGAATGGCCCTCTGCTCTAGGTGGTGTGCTCTTCTACCTCAAAAAATGCCTTATTGATCAGGAGCTT  
 TTATCAATGGCTAATTTTGAAGAATATATCCCTTGGATTCTGACACAGTCAGCACTACAAGATCTGGTG  
 CTATCTTACCAGCCTATCAACGAATGGTGTAGATGCAGTGCATTAACAACCTGGAGATTTTTCT  
 GAATGGAACAAATGGTTCTACTGAAGGAACCTACTAGAGAGGGTTGATAATTGCCATACTCCTTTTGGT  
 AAGCGCTCCTAAAGCAATGGCTTTGTGCCCACTCTGTAAACCATTATGCTATTAATGATCGTCTAGATG  
 CCATAGAAGACCTCATGGTTGTGCTGACAAAATCTCCGAAGTGTAGAGCTTCTAAAGAAGCTTCCAGA  
 TCTTGAGAGGCTACTCAGTAAAATTCATAATGTTGGGTCTCCCTGAAGAGTCAAGAACCCAGACAGC  
 AGGGCTATAATGTATGAAGAACTACATACAGCAAGAAGAAGATTATTGATTTCTTCTGCTCTGGAAG  
 GATTCAAAGTAATGTGTAATATAGGGATCATGGAAGAAGTGTGCTGATGGTTTTAAGTCTAAAATCCT  
 TAAGCAGGTCTCTCTGACAGCAAAAATCCTGAAGTCTGTTTTCTGATTTGACTGTAGAATTGAAC  
 CGATGGGATACAGCCTTTGACCATGAAAAGGCTCGAAAGACTGGACTTATTACTCCCAAAGCAGGCTTTG  
 ACTCTGATTATGACCAAGCTCTTGTGACATAAGAGAAAATGAACAGAGCCTCCTGGAATACCTAGAGAA  
 ACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTATTGGGGATTGGTAGGAACCGTTACCAGCTGGAA  
 ATTCTGAGAATTTACCAGTCAATTTGCCAGAAGAATACGAGTTGAAATCTACCAAGAAGGGCTGTA  
 AACGATACTGGACAAAACCTATTGAAAAGAAGTGGCTAATCTCATAAATGCTGAAGAACGGAGGGATGT  
 ATCATTGAAGGACTGCATGCGGCGACTGTTCTATAACTTTGATAAAAAATTACAAGGACTGGCAGTCTGCT  
 GTAGAGTGTATCGCAGTGTGGATGTTTTACTGTGCTGGCTAACTATAGTCGAGGGGTGATGGTCTTA  
 TGTGTCGCCAGTAATCTGTTGCCGGAAGATACCCCCCTTCTTAGAGCTTAAAGGATCACGCCATCC  
 TTGCATTACGAAGACTTTTTTTGGAGATGATTTTATCCTAATGACATTCTAATAGGCTGTGAGGAAGG  
 GAGCAGGAAAATGGCAAAGCCTATTGTGTGCTTGTACTGGACCAAAATAGGGGGCAAGTCTACGCTTA  
 TGAGACAGGCTGGCTTATTAGCTGTAATGGCCAGATGGGTTGTTACGTCCTGCTGAAGTGTGAGGCT  
 CACACCAATTGATAGAGTGTACTAGACTTGGTGCCTCAGACAGAATAATGTCAGGTGAAAGTACATTT  
 TTTGTTGAATTAAGTGAAGTGCAGCATACTCATGCATGCAACAGCACATTCTCTGGTCTGTGGATG  
 AATTAGGAAGAGTACTGCAACATTTGATGGGACGGCAATAGCAATGCAGTTGTTAAAGAACTGTGTA  
 GACTATAAAATGTCGTACATTATTTCAACTCACTACCATTCTAGTAGAAGATTATTCTCAAATGTT  
 GCTGTGCGCCTAGGACATATGGCATGCATGGTAGAAAAATGAATGTGAAGACCCAGCCAGGAGACTATTA  
 CGTTCTCTATAAATTCATTAAGGGAGCTTGTCTAAAAGCTATGGCTTTAATGCAGCAAGGCTTGTAA  
 TCTCCAGAGGAAGTTATTCAAAGGGACATAGAAAAGCAAGAGAATTTGAGAAGATGAATCAGTCACTA  
 CGATTATTTGGGAAGTTTGCCTGGCTAGTGAAGGTCAACTGTAGATGCTGAAGCTGTCCATAAATTGC  
 TGACTTTGATTAAGGAATTA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC401426 representing NM\_000179  
Red=Cloning site Green=Tags(s)

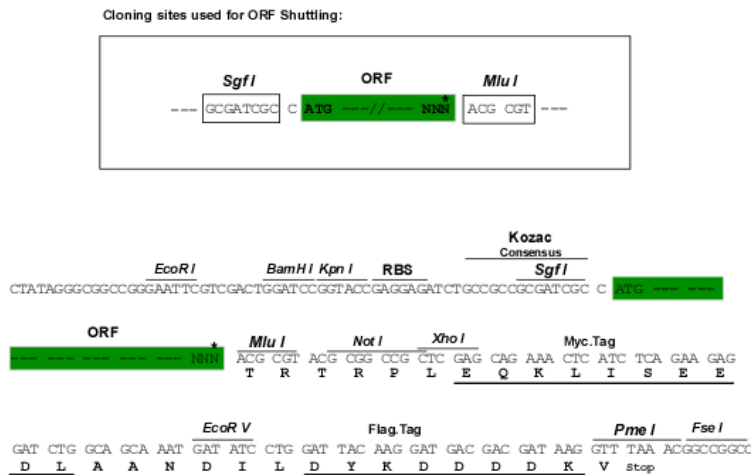
MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSPGDDAAWSEAGPGRPLARSASPPKAK  
NLNGGLRRSVAPAAPTSCDFSPGDLVWAKMEGYPWWPCLVYNHPFDGTFIREKGKSVRVHVQFFDDSPTR  
GWVSKRLLKPYTGSKSKEAQKGGHFYSAPKEILRAMQRADEALNKDKIKRLELAVCDPSEPEEEEEEMEV  
GTTYVTDKSEEDNEIESEEEVQPKTQGSRRSSRIKRRVISEDSEDIGGSDVEFKPDTKEEGSSDEISS  
GVGDSESEGLNSPVKVARKRKRMVTGNGLKRRSSRKETPSATKQATSISSETKNTLRAF SAPQNSSEQA  
HVSGGGDDSSRPTVWYHETLEWLKEEKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQN  
FDLVICYKVGKIFYELYHMDALIGVSELGLVFMKGNWAHSGFPEIAFGYSDSLVQKGYKVARVEQTETPE  
MMEARCRKMAHISKYDRVVRREICRIITKGTQTYSVLEGDPSENYSKYLKSLKEKEEDSSGHTRAYGVCF  
VDTSLGKFFIGQFSDDRHCSTRFRTLVAHYPPVQVLFKGNLSKETKTILKSSLSLQELIPGSQFWD  
SKTLRLLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGEKSELALSALGGCVFYLLKCLIDQEL  
LSMANFEEYIPLDSDTVSTTRSGAIFTKAYQRMVLDATLNNLEIFLNGTNGSTEGTLLEVRDNCHTPFG  
KRLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKIHNVSPLKSNHPDS  
RAIMYEETTSKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVISLQTKNPEGRFPDLTVELN  
RWDTAFDHEKARKTGLITPKAGFSDYDQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRNRVQLE  
IPENFTTRNLPEEYELKSTKKGCKRYWTKTIEKLANLANAEERRDVSLKDCMRRLFYNFDKNYKDWQSA  
VECIAVLVLLCLANYSRGGDGPMPRPVILLPEDTPPFLELKGSRHPCITKTFFGDDFIPNDILIGCEEE  
EQENGKAYCVLVTGPNMGGKSTLMRQAGLLAVMAQMGCYVPAEVCRLTPIDRVFTRLGASDRIMSGESTF  
FVELSETASILMHATAHSLVLVDELGRGTATFDGTAIANAVVKELAEIKCRTLFSTHYHSLVEDYSQNV  
AVRLGHMACMVENECEDPSETITFLYKFKGACPKSYGFNAARLANLPEEVIQKGRKAREFEKMNQSL  
RLFREVLASERSTVDAEAVHKLLTLIKEL

SGPTRRRLRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfi-MluI

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>RefSeq:</b>	<a href="#">NP_000170</a>
<b>RefSeq Size:</b>	4080 bp
<b>RefSeq ORF:</b>	4083 bp
<b>Locus ID:</b>	2956
<b>Cytogenetics:</b>	2p16.3
<b>Domains:</b>	PWWP, MutS_V, MutS_I, MutS_III, MutS_II, MutS_IV
<b>Protein Families:</b>	Druggable Genome, Stem cell - Pluripotency
<b>Protein Pathways:</b>	Colorectal cancer, Mismatch repair, Pathways in cancer
<b>MW:</b>	149.6 kDa
<b>Gene Summary:</b>	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]