

## Product datasheet for **RC401435**

### 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:	K854M
Affected Codon#:	854
Affected NT#:	2561
Nucleotide Mutation:	MSH6 Mutant (K854M), Myc-DDK-tagged ORF clone of Homo sapiens mutS homolog 6 (E. coli) (MSH6) as transfection-ready DNA
Effect:	Colorel ner
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:	>RC401435 representing NM_000179 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCGGACAGAGCACCTGTACAGCTTCTTCCCAAGTCTCCGGCGCTGAGTGATGCCAACAAGGCCT  
CGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGCTGCCCCGGGGCCTCTCCTTCCCGAGGCGGGGA  
TGCGGCCTGGAGCGAGGCTGGGCCTGGGCCAGGCCCTTGGCGCGCTCCGCGTACCGCCCAAGGCGAAG  
AACCTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGCTGCCCCACCAGTTGTGACTTCTACCAGGAG  
ATTTGGTTTGGCCAAGATGGAGGGTTACCCTGGTGGCCTTGTCTGGTTTACAACCACCCCTTTGATGG  
AACATTATCCGCGAGAAAGGAAATCAGTCCGTGTTTCATGTACAGTTTTTTGATGACAGCCCAACAAGG  
GGCTGGGTTAGCAAAGGCTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAAGGGAGGTC



[View online »](#)

ATTTTACAGTGCAAAGCCTGAAATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAA  
 GATTAAGAGGCTTGAATTGGCAGTTTGTGATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTA  
 GGCACAACCTACGTAACAGATAAGAGTGAAGAAGATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTA  
 AGACACAAGGATCTAGGCGAAGTAGCCGCCAAATAAAAAACGAAGGGTCATATCAGATTCTGAGAGTGA  
 CATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAGGAAGGAAGCAGTGTGAAATAAGCAGT  
 GGAGTGGGGGATAGTGAAGTGAAGGCCTGAACAGCCCTGTCAAAGTTGCTCGAAAGCGGAAGAGAATGG  
 TGACTGGAAATGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCAGCCACCAACAAGCAAC  
 TAGCATTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTGCCCCTCAAATTTCTGAATCCCAAGCC  
 CACGTTAGTGGAGGTGGTGTGACAGTAGTCGCCCTACTGTTTGGTATCATGAACTTTAGAATGGCTTA  
 AGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGCCTGATCACCCGATTTTGTGATCTACACTCTA  
 TGTGCCTGAGGATTTCTCAATTCTTGTACTCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAAC  
 TTTGATCTTGTCTGTACAAGTGGGAAAATTTATGAGCTGTACCACATGGATGCTCTTATTGGAG  
 TCAGTGAAGTGGGCTGGTATTCATGAAAGGCAACTGGGCCATTCTGGCTTCTGAAATTGCATTTGG  
 CCGTTATTCAGATTCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGAACAGACTGAGACTCCAGAA  
 ATGATGGAGGCACGATGTAGAAAGATGGCACATATATCCAAGTATGATAGAGTGGTGGAGAGGAGATCT  
 GTAGGATCATTACCAAGGTACACAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAA  
 GTATCTTCTTAGCCTCAAAGAAAAGAGGAAGATTCTTCTGGCCATACTCGTGCATATGGTGTGTGCTTT  
 GTTGATACTTCACTGGGAAAGTTTTTCATAGGTGAGTTTTCAGATGATCGCCATTGTTTCGAGATTTAGGA  
 CTCTAGTGGCACACTATCCCCAGTACAAGTTTTATTTGAAAAAGGAAATCTCTCAAAGGAAACTAAAAC  
 AATTCTAAAGAGTTCATTGTCTGTCTCTTCCAGGAAGTCTGATACCCGGCTCCAGTTTTGGGATGCA  
 TCCAAAACCTTTGAGAAGTCTCCTTGAGGAAGAATTTTAGGGAAAAGCTAAGTATGGCATTGGGGTGA  
 TGTTACCCAGGTGCTTAAAGGATGACTTCCAGTCTGATCCATTGGGTTGACACCAGGAGAGAAAAG  
 TGAATGGCCCTCTCTGCTCTAGGTGGTGTGCTCTTCTACCTCAAAAAATGCCTTATTGATCAGGAGCTT  
 TTATCAATGGCTAATTTGAAGAATATATTCCTTGGATTCTGACACAGTCAGCACTACAAGATCTGGTG  
 CTATCTTACCAGCAAGCTATCAACGAATGGTGTAGATGCAGTGCATTAACAACCTGGAGATTTTTCT  
 GAATGGAACAAATGGTTCTACTGAAGGAACCTACTAGAGAGGGTTGATACTTGCCTACTCCTTTTGGT  
 AAGCGCTCCTAAAGCAATGGCTTTGTGCCCACTCTGTAAACCATTATGCTATTAATGATCGTCTAGATG  
 CCATAGAAGACCTCATGGTTGTGCTGACAAAATCTCCGAAGTTGTAGAGCTTCTAAAGAAGCTTCCAGA  
 TCTTGAGAGGCTACTCAGTAAAATTCATAATGTTGGGTCTCCCCTGAAGAGTCAAGAACCCAGACAGC  
 AGGGCTATAATGTATGAAGAACTACATACAGCAAGAAGATGATTATTGATTTTCTTCTGCTCTGGAAG  
 GATTCAAAGTAATGTGTAATATAGGGATCATGGAAGAAGTGTGCTGATGGTTTTAAGTCTAAAATCCT  
 TAAGCAGGTCTCTCTGACAGCAAAAATCCTGAAGTCTGTTTTCTGATTTGACTGTAGAATTGAAC  
 CGATGGGATACAGCCTTTGACCATGAAAAGGCTCGAAAGACTGGACTTATTACTCCCAAAGCAGGCTTTG  
 ACTCTGATTATGACCAAGCTCTTGTGACATAAGAGAAAATGAACAGAGCCTCCTGGAATACCTAGAGAA  
 ACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTATTGGGGATTGGTAGGAACCGTTACCAGCTGGAA  
 ATTCTGAGAATTTACCAGTCAATTTGCCAGAAGAATACGAGTTGAAATCTACCAAGAAGGGCTGTA  
 AACGATACTGGACAAAACCTATTGAAAAGAAGTTGGCTAATCTCATAAATGCTGAAGAACGGAGGGATGT  
 ATCATTGAAGGACTGCATGCGGCGACTGTTCTAATACTTTGATAAAAAATTACAAGGACTGGCAGTCTGCT  
 GTAGAGTGTATCGCAGTGTGGATGTTTTACTGTGCTGGCTAACTATAGTCGAGGGGGTGTGGTCTCTA  
 TGTGTCGCCAGTAATCTGTTGCCGGAAGATACCCCCCTTCTTAGAGCTTAAAGGATCACGCCATCC  
 TTGCATTACGAAGACTTTTTTTGGAGATGATTTTATTCCTAATGACATTCTAATAGGCTGTGAGGAAGG  
 GAGCAGGAAAATGGCAAAGCCTATTGTGTGCTTGTACTGGACCAAAATAGGGGGCAAGTCTACGCTTA  
 TGAGACAGGCTGGCTTATTAGCTGTAATGGCCAGATGGGTTGTTACGTCCTGCTGAAGTGTGACAGGCT  
 CACACCAATTGATAGAGTGTACTAGACTTGGTGCCTCAGACAGAATAATGTCAGGTGAAAGTACATTT  
 TTTGTTGAATTAAGTGAAGTGCAGCATACTCATGCATGCAACAGCACATTCTCTGGTCTGTGGATG  
 AATTAGGAAGAGTACTGCAACATTTGATGGGACGGCAATAGCAATGCAGTTGTTAAAGAACTGTGCTGA  
 GACTATAAAATGTCGTACATTATTTCAACTCACTACCATTCTTAGTAGAAGATTATTCTCAAATGTT  
 GCTGTGCGCCTAGGACATATGGCATGCATGGTAGAAAATGAATGTGAAGACCCAGCCAGGAGACTATTA  
 CGTTCTCTATAAATTCATTAAGGGAGCTTGTCTAAAAGCTATGGCTTTAATGCAGCAAGGCTTGTCTAA  
 TCTCCCAGAGGAAGTTATTCAAAGGGACATAGAAAAGCAAGAGAATTTGAGAAGATGAATCAGTCACTA  
 CGATTATTTGGGAAGTTTGCCTGGCTAGTGAAGGTCAACTGTAGATGCTGAAGCTGTCCATAAATTGC  
 TGACTTTGATTAAGGAATTA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

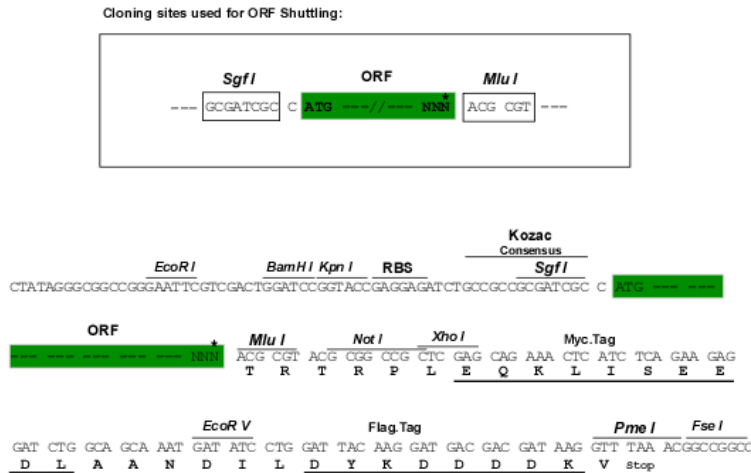
>RC401435 representing NM\_000179  
Red=Cloning site Green=Tags(s)

MSRQSTLYSFFPKSPALSDANKASARASREGGAAAAPGASPSPGDDAAWSEAGPGRPLARSASPPKAK  
NLNGGLRRSVAPAAPTSCDFSPGDLVWAKMEGYPWWPCLVYNHPFDGTFIREKGKSVRVHVQFFDDSPTR  
GWVSKRLLKPYTGSKSKEAQKGGHFYSAPKEILRAMQRADEALNKDKIKRLELAVCDPESEPEEEEEMEV  
GTTYVTDKSEEDNEIESEEEVQPKTQGSRRSSRIKRRVISEDSEDIIGGSDVEFKPDTKEEGSSDEISS  
GVGDSESEGLNSPVKVARKRKRMVTGNGLKRRSSRKETPSATKQATSISSEKNTLRAFSAQNSESQA  
HVSGGGDDSSRPTVWYHETLEWLKEEKRRDEHRRRDPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQN  
FDLVICYKVGKIFYELYHMDALIGVSELGLVFMKGNWAHSGFPEIAFGYSDSLVQKGYKVARVEQTETPE  
MMEARCRKMAHISKYDRVVRREICRIITKGTQTYSVLEGDPSENYSKYLKSLKEKEEDSSGHTRAYGVCF  
VDTSLGKFFIGQFSDDRHCSTRFRTLVAHYPPVQVLFKGNLSKETKTKILKSSLSLQGLIPGSQFWD  
SKTLRLLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGEKSELALSALGGCVFYLLKCLIDQEL  
LSMANFEEYIPLDSDTVSTTRSGAIFTKAYQRMVLDATLNNLEIFLNGTNGSTEGTLLELVDTCHTPF  
KRLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKIHNVSPLKSNHPDS  
RAIMYEETTSKMIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVLSLQTKNPEGRFPDLTVELN  
RWDTAFDHEKARKTGLITPKAGFSDYDQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRNRVQLE  
IPENFTTRNLPEEYELKSTKKGCKRYWTKTIEKLANLANAEERRDVSLKDCMRRLFYNFDKNYKDWQSA  
VECIAVLVLLCLANYSRGGDPMCRPVILLPEDTPPFLELKGSRHPCITKTFFGDDFIPNDILIGCEEE  
EQENGKAYCVLVTGPNMGKSTLMRQAGLLAVMAQMGCYVPAEVCRLTPIDRVFTRLGASDRIMSGESTF  
FVELSETASILMHATAHSLVLDDELGRGTATFDGTAIANAVVKELAEIKCRTLFSTHYHSLVEDYSQNV  
AVRLGHMACMVENECEDEPSQETITFLYKFKGACPKSYGFNAARLANLPEEVIQKGRHAKAREFEKMNQSL  
RLFREVLASERSTVDAEAVHKLLTLIKEL

SGPTRRRLRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


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

<b>OTI Disclaimer:</b>	<p>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.</p> <p>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></p>
<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>	<p>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]</p>