

Product datasheet for **RC401443**

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:	Y977X
Affected Codon#:	977
Affected NT#:	2931
Nucleotide Mutation:	MSH6 Mutant (Y977X), Myc-DDK-tagged ORF clone of Homo sapiens mutS homolog 6 (E. coli) (MSH6) as transfection-ready DNA
Effect:	Colorel / 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:	2928 bp
Restriction Sites:	Sgfi-Mlul



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ORF Nucleotide Sequence:

>RC401443 representing NM_000179
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCGCGACAGAGCACCTGTACAGCTTCTTCCCAAGTCTCCGGCGCTGAGTGATGCCAACAAAGCGCT
 CGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGTGCCCGGGGCTCTCCTTCCCAAGCGGGGA
 TCGGCCCTGGAGCGAGGCTGGGCTGGGCCAGGCCCTTGGCGCGCTCCGCGTACCGCCCAAGGCGAAG
 AACCTCAACGGAGGGCTGCGGAGATCGGTAGCGCTGCTGCCCCACCAGTTGTGACTTCTCACCAGGAG
 ATTTGGTTTGGGCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGTTTACAACCACCCCTTTGATGG
 AACATTCATCCGCGAGAAAGGAAATCAGTCCGTGTTTACATGTACAGTTTTTTGATGACAGCCCAACAAGG
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 CATTGGTGGCTCTGATGTGGAATTTAAGCCAGACACTAAGGAGGAAGGAAGCAGTGATGAAATAAGCAGT
 GGAGTGGGGGATAGTGAGAGTGAAGGCCTGAACAGCCCTGTCAAAGTTGCTCGAAAGCGGAAGAGAATGG
 TGACTGGAAATGGCTCTTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCAGCCACCAAAACAAGCAAC
 TAGCATTTTCATCAGAAACCAAGAATACTTTGAGAGCTTCTCTGCCCTCAAATTTCTGAATCCCAAGCC
 CAGGTTAGTGGAGGTGGTGTGACAGTAGTCCCTACTGTTTGGTATCATGAACTTTAGAATGGCTTA
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 TGTGCCTGAGGATTTCTCAATTTCTGTACTCCTGGGATGAGGAAGTGGTGGCAGATTAAGTCTCAGAAC
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 ATGATGGAGGCACGATGTAGAAAGATGGCACATATATCCAAGTATGATAGAGTGGTGGAGGGGAGATCT
 GTAGGATCATTACCAAGGTACACAGACTTACAGTGTGCTGGAAGGTGATCCCTCTGAGAACTACAGTAA
 GTATCTTCTTAGCCTCAAAGAAAAGAGGAAGATTTCTTGGCCATACTCGTGCATATGGTGTGTGCTTT
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 AATTCTAAAGAGTTCATTGTCCTGTTCTCTTCAGGAAGGTCTGATACCCGGCTCCCAGTTTTGGGATGCA
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 AAGCGGCTCCTAAAGCAATGGCTTTGTGCCCACTCTGTAAACCATTATGCTATTAATGATCGTCTAGATG
 CCATAGAAAGACCTCATGGTTGTGCTGACAAAATCTCCGAAGTTGTAGAGCTTCTAAAGAAGCTTCCAGA
 TCTTGAGAGGCTACTCAGTAAAATTCATAATGTTGGGTCTCCCCTGAAGAGTCAAGAACCCAGACAGC
 AGGGCTATAATGTATGAAGAACTACATACAGCAAGAAGAAGATTATTGATTTTCTTCTGCTCTGGAAG
 GATTCAAAGTAATGTGTAATTTATAGGGATCATGGAAGAAGTTGCTGATGGTTTTAAGTCTAAAATCCT
 TAAGCAGGTATCTCTGACAGACAAAAATCCTGAAGGTCGTTTTCTGATTTGACTGTAGAATTGAAC
 CGATGGGATACAGCCTTTGACCATGAAAAGGCTCGAAAGACTGGACTTATTCTCCAAAGCAGGCTTTG
 ACTCTGATTATGACCAAGCTCTTGTGACATAAGAGAAAATGAACAGAGCCTCCTGGAATACCTAGAGAA
 ACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTATTGGGGATTGGTAGGAACCGT

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC401443 representing NM_000179
 Red=Cloning site Green=Tags(s)

MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSGGDAAWSEAGPGRPLARSASPPKAK
 NLNGGLRRSVAPAAPTSCDFSPGDLVWAKMEGYPWVCLVYNHPFDGTFIREKGSVRVHVQFFDSDPTR
 GWYSKRLLKPYTGSKSKEAQKGGHFYSAKPEILRAMQRADEALNKDKIKRLELAVCDEPSEPEEEEEEMEV
 GTTYVTDKSEEDNEIESEEEVQPKTQGSRRSSRQIKRRRVIDSESDIGGSDVEFKPDTKEEGSSDEISS
 GVG DSESEGLNSPVKVARKRKRMVTGNGSLKRKSSRKETPSATQATSISSETKNLRAF SAPQNSESQA
 HVSGGGDDSSRPTVWYHETLEWLKEEKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQN
 FDLVICYKVGKFYELYHMDALIGVSELGLVFMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPE
 MMEARCRKMAHISKYDRVVRREICRIITKGTQYTVLEGDPSENYSKYLLSLKEKEEDSSGHTRAYGVCF
 VDTSLGKFFIGQFSDDRHCSRFTLV AHYPPVQVLFKGNLSKETKTIKSSLSLQEG LIPGSQF WDA
 SKTLRTRLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGEKSELALSALGGCVFY LKCLIDQEL
 LSMANFEEYIPLDSDTVSTRSGAIFTKAYQRMVLDVATLNNLEIFLNGTNGSTEGTLLERVDTCHTPFG
 KRLLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKIHNVGSPLKSQNH PDS
 RAIMYEETTYSKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVISLQTKNPEGRFPDLTVELN
 RWDATFDEHKARKTGLITPKAGFSDSDYQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRNR

SGPTRRRL**EQKLISEEDLA**ANDILDYKDDDDKV

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:	2928 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:	107.4 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]