

Product datasheet for **RC401463**

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:	Q1280X
Affected Codon#:	1280
Affected NT#:	3838
Nucleotide Mutation:	MSH6 Mutant (Q1280X), 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:	3837 bp
Restriction Sites:	Sgfl-Mlul
ORF Nucleotide Sequence:	>RC401463 representing NM_000179 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTGCGGACAGAGCACCTGTACAGCTTCTTCCCAAGTCTCCGGCGCTGAGTGATGCCAACAAGGCCT
CGGCCAGGGCCTCACGCGAAGGCGGCCGTGCCGCCGCTGCCCCGGGGCCTCTCCTTCCCGAGGCGGGGA
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AACCTCAACGGAGGGCTGCGGAGATCGGTAGCGCCTGCTGCCCCACCAGTTGTGACTTCTACCAGGAG
ATTTGGTTTGGCCAAGATGGAGGGTTACCCCTGGTGGCCTTGTCTGGTTTACAACCACCCCTTTGATGG
AACATTATCCGCGAGAAAGGAAATCAGTCCGTGTTTCATGTACAGTTTTTTGATGACAGCCCAACAAGG
GGCTGGGTTAGCAAAAGGCTTTAAAGCCATATACAGGTTCAAATCAAAGGAAGCCAGAAAGGGAGGTC



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ATTTTACAGTGCAAAGCCTGAAATACTGAGAGCAATGCAACGTGCAGATGAAGCCTTAAATAAAGACAA
 GATTAAGAGGCTTGAATTGGCAGTTTGTGATGAGCCCTCAGAGCCAGAAGAGGAAGAAGAGATGGAGGTA
 GGCACAACCTACGTAACAGATAAGAGTGAAGAAGATAATGAAATTGAGAGTGAAGAGGAAGTACAGCCTA
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 GACTATAAAATGTCGTACATTATTTCAACTACTACCATTCTTAGTAGAAGATTATTCTCAAATGTT
 GCTGTGCGCCTAGGACATATGGCATGCATGGTAGAAAAATGAATGTGAAGACCCAGC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC401463 representing NM_000179
 Red=Cloning site Green=Tags(s)

MSRQSTLYSFFPKSPALSDANKASARASREGGRAAAAPGASPSGGDAAWSEAGPGRPLARSASPPKAK
 NLNGGLRRSVAPAAPTSCDFSPGDLVWAKMEGYPPWVCLVYNHPFDGTFIREKGSVVRVHVQFFDDSPTR
 GWVSKRLLKPYTGSKSKEAQKGGHFYSAKPEILRAMQRADEALNKDKIKRLELAVCDEPSEPEEEEEMEV
 GTTYVTDKSEEDNEIESEEEVQPKTQGSRRSSRQIKRRRVIDSESDIGGSDVEFKPDTKEEGSSDEISS
 GVGDSSEGLNSPVKVARKRKRMVTGNSLKRKSSRKETPSATKQATSISSETKNLRAFAPQNSESA
 HVSGGGDDSSRPTVWYHETLEWLKKEEKRRDEHRRRPDHPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQN
 FDLVICYKVGKFYELYHMDALIGVSELGLVFMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPE
 MMEARCRKMAHISKYDRVVRREICRIITKGTQTYSVLEGDPSENYSKYLLSLKEKEEDSSGHTRAYGVCF
 VDSLKGFIFIGQFSDDRHCSRFRTLVAHYPPVQVLFKGNLSKETKTKILKSSLSLQGLIPGSQFWD
 SKTLRLLLEEEYFREKLSDGIGVMLPQVLKGMTSESDSIGLTPGEKSELALSALGGCVFYLLKCLIDQEL
 LSMANFEEYIPLDSDTVSTRSGAIFTKAYQRMVLDVATLNNLEIFLNGTNGSTEGTLLEVRDTCHTPF
 KRLKQWLCAPLCNHYAINDRLDAIEDLMVVPDKISEVVELLKKLPDLERLLSKIHNVGSPLKSQNHPS
 RAIMYEETTSYKKKIIDFLSALEGFKVMCKIIGIMEEVADGFKSKILKQVLSLQTKNPEGRFPDLTVELN
 RWDTAFDHEKARKTGLITPKAGFDSYDQALADIRENEQSLLEYLEKQRNRIGCRTIVYWGIGRNRQLE
 IPENFTTRNLPEEYELKSTKKGCKRYWTKTIEKKLANLINAERRDVSLKDCMRRLFYNFDKNYKDWQSA
 VECIAVLVLLCLANYSRGGDGPMCRPVILLPEDTPPFLELKGRHPCITKTFFGDDFIPNDILIGCEEE
 EQENGKAYCVLVTGPNMGGKSTLMRQAGLLAVMAQMGCVYPAEVCRLTPIDRVFTRLGASDRIMSGESTF
 FVELSETASILMHATAHSLVLVDELGRGTATFDGTAIANAVVKELAEIKCRTLFSHYHSLVEDYSQNV
 AVRLGHMACMVENECEDPS

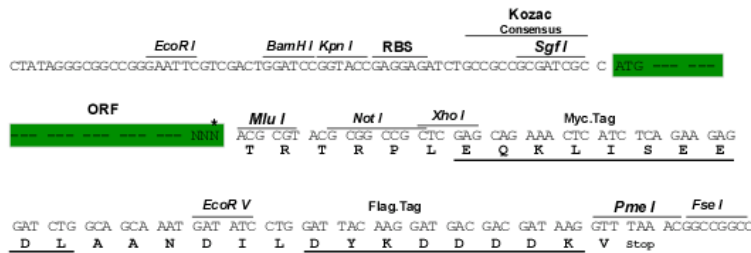
SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

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:	3837 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:	140.7 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]