

Product datasheet for **RG239924**

MSH6 (NM_001281493) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | MSH6 (NM_001281493) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | MSH6 |
| Synonyms: | GTBP; GTMBP; HNPCC5; HSAP; MMRC53; p160 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| ORF Nucleotide Sequence: | >RG239924 representing NM_001281493. Blue=ORF Red=Cloning site Green=Tag(s) |

```
GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC CGCATCGCC
ATGGTGACTGGAAATGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCAGCCACCAAACAA
GCAACTAGCATTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTGCCCTCAAATTTCTGAATCC
CAAGCCCACGTTAGTGGAGGTGGTGATGACAGTAGTCGCCCTACTGTTGGTATCATGAACTTTAGAA
TGGCTTAAGGAGGAAAAGAGAAGAGATGAGCACAGGAGGAGGCCCTGATCACCCGATTTTGTGCATCT
ACACTCTATGTGCCTGAGGATTTCTCAATTCTGTACTCCTGGGATGAGGAAGTGGTGGCAGATTAAG
TCTCAGAACTTTGATCTTGTCTATCTGTTACAAGGTGGGAAATTTTATGAGCTGTACCACATGGATGCT
CTTATTGGAGTCAGTGAAGTGGGCTGGTATTCATGAAAAGGCAACTGGGCCATTCTGGCTTTCCTGAA
ATTGCATTTGGCCGTTATTCAGATTCCTGGTGCAGAAGGGCTATAAAGTAGCACGAGTGGAAACAGACT
GAGACTCCAGAAATGATGGAGGCACGATGTAGAAAAGTGGCACATATATCCAAGTATGATAGAGTGGTG
AGGAGGGAGATCTGTAGGATCATTACCAAGGTACACAGACTTACAGTGTGCTGGAAGGTGATCCCTCT
GAGAACTACAGTAAGTATCTTCTTAGCCTCAAAGAAAAGAGGAAGATCTTCTGGCCATACTCGTGCA
TATGGTGTGTGCTTTGTTGATACTTCACTGGGAAAGTTTTTTCATAGGTCAGTTTTTCAGATGATCGCCAT
TGTTTCGAGATTTAGGACTCTAGTGGCACACTATCCCCAGTACAAGTTTTATTTGAAAAGGAAATCTC
TCAAAGGAAACTAAAACAATTCTAAAGAGTTCATTGTCCTGTTCTTTCAGGAAGTCTGATACCCGGC
TCCCAGTTTTGGGATGCATCCAAAACCTTGGAGAACTCTCCTTGAGGAAGAATATTTTAGGAAAAGCTA
AGTGATGGCATTGGGGTGTGTTACCCAGGTGCTTAAAGGTATGACTTCAGAGTCTGATTCATTGGG
TTGACACCAGGAGAGAAAAGTGAATGGCCCTCTCTGCTTAGGTGGTGTGCTTCTACCTCAAAAAA
TGCCTTATTGATCAGGAGCTTTTATCAATGGCTAATTTTGAAGAATATATTCCTTGATTCTGACACA
GTCAGCACTACAAGATCTGGTGTATCTTACCAAAGCCTATCAACGAATGGTGTAGATGCAGTGACA
TTAAACAACCTGGAGATTTTCTGAATGGAACAAATGGTTCTACTGAAGGAACCCCTACTAGAGGGTT
GATACTTGCCATACTCCTTTTGGTAAGCGGCTCCTAAAGCAATGGCTTTGTGCCCACTCTGTAAACAT
TATGCTATTAATGATCGTCTAGATGCCATAGAAGACCTCATGGTTGTGCCTGACAAAATCTCCGAAGTT
```



[View online »](#)

GTAGAGCTTCTAAAGAAGCTTCCAGATCTTGAGAGGCTACTCAGTAAAATTCATAATGTTGGGTCTCCC
 CTGAAGAGTCAGAACCACCCAGACAGCAGGGCTATAATGTATGAAGAACTACATACAGCAAGAAGAAG
 ATTATTGATTTTCTTCTGCTCTGGAAGGATCAAAGTAAATGTGTAAAATATAGGGATCATGGAAGAA
 GTTGCTGATGGTTTTAAGTCTAAAATCCTTAAGCAGGTCATCTCTGCAGACAAAAATCTGAAGGT
 CGTTTTCTGATTTGACTGTAGAATTGAACCGATGGGATACAGCCTTTGACCATGAAAAGGCTCGAAAG
 ACTGGACTTATTACTCCCAAAGCAGGCTTTGACTCTGATTATGACCAAGCTTTGCTGACATAAGAGAA
 AATGAACAGAGCCTCCTGGAATACCTAGAGAAAACAGCGCAACAGAATTGGCTGTAGGACCATAGTCTAT
 TGGGGGATTGGTAGGAACCGTTACCAGCTGGAATTCCTGAGAATTTACCACCTCGCAATTTGCCAGAA
 GAATACGAGTTGAAATCTACCAAGAAGGCTGTAACGATACTGGACCAAACTATTGAAAAGAAGTTG
 GCTAATCTCATAAATGCTGAAGAACGGAGGGATGTATCATTGAAGGACTGCATGCGGCGACTGTTCTAT
 AACTTTGATAAAAATTACAAGGACTGGCAGTCTGCTGTAGAGTGTATCGCAGTGTGGATGTTTTACTG
 TGCCTGGTAACATAGTCGAGGGGGTGTGGTCTATGTGTGCGCCAGTAATTCTGTTGCCGGAAGAT
 ACCCCCCCTTCTAGAGCTTAAGGATCACGCCATCCTGCATTACGAAGACTTTTTTGGAGATGAT
 TTTATTCCTAATGACATTCTAATAGGCTGTGAGGAAGAGGAGCAGGAAAAATGGCAAAGCCTATTGTGTG
 CTTGTTACTGGACCAATATGGGGGCAAGTCTACGCTTATGAGACAGGCTGGCTTATTAGCTGTAATG
 GCCCAGATGGGTTGTTAGTCCCTGCTGAAGTGTGCAGGCTCACACCAATTGATAGAGTGTTTACTAGA
 CTTGGTGCCTCAGACAGAATAATGTCAGGTGAAAGTACATTTTTTGTGAATTAAGTAAAAGTGGCAGC
 ATACTCATGCATGCAACAGCACATTCTCTGGTGTGTGGATGAATTAGGAAGAGGACTGCAACATTT
 GATGGGACGGCAATAGCAAAATGCAGTTGTTAAAGAACTTGTGAGACTATAAAAATGTCGTACATTATTT
 TCAACTCACTACCATTATTAGTAGAAGATTATCTCAAATGTTGCTGTGCGCCTAGGACATATGGCA
 TGCATGGTAGAAAATGAATGTGAAGACCCAGCCAGGAGACTATTACGTTCTCTATAAATTCATTAAG
 GGAGCTTGTCTAAAAGCTATGGCTTTAATGCAGCAAGGCTTGCTAATCTCCAGAGGAAGTTATTCAA
 AAGGGACATAGAAAAGCAAGAGAATTTGAGAAGATGAATCAGTCACTACGATTATTTCCGGAAGTTTGC
 CTGGTACTGAAAAGGTCAACTGTAGTGTGAAGCTGTCCATAAATTTGCTGACTTTGATTAAGGAATTA
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC

Protein Sequence:

>Peptide sequence encoded by RG239924
 Blue=ORF Red=Cloning site Green=Tag(s)

MVTGNSLKRKSSRKETPSATKQATSISSETKNTLRAFSAQNSESQAHVSGGGDDSSRPTVWYHETLE
 WLKEEKRRDEHRRRDPDFDASTLYVPEDFLNSCTPGMRKWWQIKSQNFDLVICYKVGKFYELYHMDA
 LIGVSELGLVFMKGNWAHSGFPEIAFGRYSDSLVQKGYKVARVEQTETPEMMEARCRKMAHISKYDRVV
 RREICRIITKGTQYTSVLEGDPSSENYKYLKSLKEKEEDSSGHTRAYGVCFVDTSLGKFFIGQFSDDRH
 CSRFRTLVAHYPPVQVLFKGNLSKETKILKSSLSCSLQEGLIPGSQFWDASKLRTLLEEEYFREKL
 SDGIGVMLPQVLKGMTSESISGLTPGEKSELALSALGGCVFYLLKCLIDQELLSMANFEEYIPLDSDT
 VSTRSGAIFTKAYQRMVLDVTLNMLEIFLNGTNGSTEGTLLERVDTCHTPFGKRLKQWLCAPLCNH
 YAINDRLDAIEDLMVVPDKISEVVLLKKLPDLERLLSKIHNVGSPLKSNHPDSRAIMYEETTSKSKK
 IIDFLSALEGFKVMCKIIGIMEVADGFKSKILKQVISLQTKNPEGRFPDLTVELNRWDTAFDHEKARK
 TGLITPKAGFDSYDQALADIRENEQSLLLEYLEKQRNRIGCRTIVYWGIGRNRYLEIPENFTTRNLPE
 EYELKSTKKGCKRYWTKTIEKLANLINAEEERDVSLKDCMRRLFYNFDKNYKDWQSAVECIAVLVLL
 CLANYSRGGDGPMPVILLPEDTPPFLELKGRHPCITKTFGDDFIPNDILIGCEEEEQENGKAYCV
 LVTGPNMGGKSTLMRQAGLLAVMAQMGCVPAEVCRLTPIDRVFTRLGASDRIMSGESTFFVELSETAS
 ILMHATAHSLVLVDELGRGTATFDGTAIANAVVKELAETIKRFLFSTHYHSLVEDYSQNVAVRLGHMA
 CMVENECEDPSQETITFLYKFIKACPKSYGFNAARLANLPEEVIQKGRKAREFEKMNQSLRFLREVC
 LASERSTVDAEAVHKLTLIKEL
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYTNTRIEKYEDGGVLHVVSFSYRYEAGRVIGDFKVMGTGFPE
SVIFTDKIIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPISILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

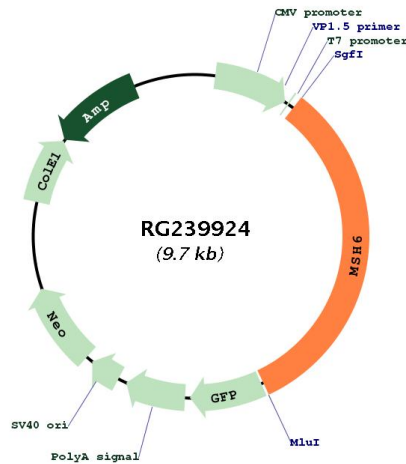
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001281493

ORF Size: 3174 bp

OTI Disclaimer: 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: | NM_001281493.1 , NP_001268422.1 |
| RefSeq Size: | 4177 bp |
| RefSeq ORF: | 3177 bp |
| Locus ID: | 2956 |
| UniProt ID: | P52701 |
| Cytogenetics: | 2p16.3 |
| Protein Families: | Druggable Genome, Stem cell - Pluripotency |
| Protein Pathways: | Colorectal cancer, Mismatch repair, Pathways in cancer |
| MW: | 120.2 kDa |
| Gene Summary: | <p>This gene encodes a member of the DNA mismatch repair MutS family. In <i>E. coli</i>, 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> |