

Product datasheet for **RG224095**

MSH5 (NM_172165) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MSH5 (NM_172165) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MSH5
Synonyms:	G7; MUTSH5; NG23; POF13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG224095 representing NM_172165
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCTCCTTAGGAGCGAACCCAAAGGAGGACACCGCAGGGACCGAGACCTGGGGCGGCCTCCTCCGGCT
 TCCCCAGCCCGGCCAGTGCCGGGCCAGGGAGGCCGAGGAGGAGGAAGTCGAGGAGGAGGAGGAGCT
 GGCCGAGATCCATCTGTGTGTGCTGTGGAATTCAGGATACTTGGGCATTGCCTACTATGATACTAGTGAC
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 GGGGACCTGCACTGCGAGATCCGGGACCAGGAGACGCTGCTGATGTACCAGCTACAGTCCAGGTGCTGG
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 AGAACCAATGGAAAATTGCCAGACATTAGTGGATAAGTTTATGAACTGGATTTGGAAGATCCTAACCT
 GGACTTGAACGTTTTTCTGAGCCAGGAAGTGTGCCTGCTGCCACCAGCATCCTC

ACGGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG224095 representing NM_172165
 Red=Cloning site Green=Tags(s)

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MASLGANPRRTPQGPRPGAASSGFPPAPVPGPREAEEEEVEEEEELAEIHLCVLWNSGYLGIAYYDTS
STIHFMPDAPDHESLKLQRVLDEINPQSVVTSAKQDENMTRFLGKLASQEHREPKRPEIIFLPSVDFGL
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FKKFMLTHLVNIDQDTYSVLQIFKSESHPSVYKVASGLKEGLSLFGILNRCHCKWGEKLLRWFTRPTH
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RSLPQSIQLFRDIAQEFSDDLHHIASLIGKVDFEGSLAENRFTVLPNIDPEIDEKRRMLMGLPSFLTEV
ARKELENLDSRIPSCSVIYIPLIGFLLSIPRLPSMVEASDFEINGLDFMFLSEEKHYRSARTKELDALL
GDLHCEIRDQETLLMYQLQCQVLAARAVALTRVLDLASRLDVLLALASAARDYGYSRPRYSPQVLGVRIQN
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CPHIFVATNFLSLVQLQLLPQGPLVQYLTMETCEDGNDLVFFYQVCEGVAKASHASHTAAQAGLPDKLVA
RGKEVSDLIRSGKPIKPVKDLLKKNQMENCQTLVDKFMKLDLEDPNLDLNVFMSQEVLPAAATSIL
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TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

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).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_172165.3](#), [NP_751897.1](#)

RefSeq Size: 2790 bp

RefSeq ORF: 2508 bp

Locus ID: 4439

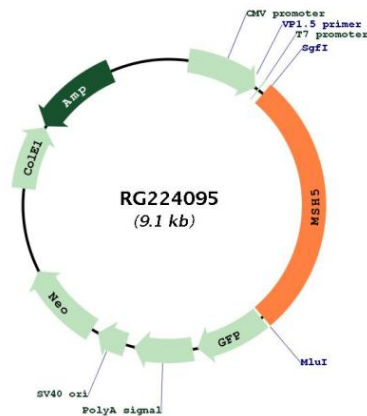
UniProt ID: [O43196](#)

Cytogenetics: 6p21.33

Protein Families: Druggable Genome

Gene Summary:

This gene encodes a member of the mutS family of proteins that are involved in DNA mismatch repair and meiotic recombination. This protein is similar to a *Saccharomyces cerevisiae* protein that participates in segregation fidelity and crossing-over events during meiosis. This protein plays a role in promoting ionizing radiation-induced apoptosis. This protein forms hetero-oligomers with another member of this family, mutS homolog 4. Polymorphisms in this gene have been linked to various human diseases, including IgA deficiency, common variable immunodeficiency, and premature ovarian failure. Alternative splicing results multiple transcript variants. Read-through transcription also exists between this gene and the downstream chromosome 6 open reading frame 26 (C6orf26) gene. [provided by RefSeq, Feb 2011]

Product images:

Circular map for RG224095