

## Product datasheet for **RC224044**

### MSH5 (NM\_025259) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MSH5 (NM_025259) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MSH5
Synonyms:	G7; MUTSH5; NG23; POF13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC224044 representing NM\_025259  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCTCCTTAGGAGCGAACCCAAAGGAGGACACCGCAGGGACCGAGACCTGGGGCGGCCTCCTCCGGCT  
 TCCCAGCCCGGCCAGTGCCGGGCCAGGGAGGCCGAGGAGGAGGAAGTCGAGGAGGAGGAGGAGCT  
 GGCCGAGATCCATCTGTGTGTGCTGTGGAATTCAGGATACTTGGGCATTGCCTACTATGATACTAGTGAC  
 TCCACTATCCACTTCATGCCAGATGCCCCAGACCAGAGAGCCTCAAGCTTCTCCAGAGAGTTCTGGATG  
 AGATCAATCCCCAGTCTGTTGTTACGAGTGCCAAACAGGATGAGAATATGACTCGATTTCTGGGAAAGCT  
 TGCCTCCAGGAGCACAGAGAGCCTAAAAGACCTGAAATCATATTTTTGCCAAGTGTGGATTTTGGTCTG  
 GAGATAAGCAAACAACGCCTCCTTTCTGGAACTACTCCTTCATCCAGACGCCATGACTGCCACTGAGA  
 AAATCCTCTTCTCTCTTCCATTATTCCCTTTGACTGCCTCCTCACACCCCGAGGAGATTAAGATTTAC  
 CCCGATCCACTGCTGATCCCCTCCAGGTCGAGCACTTGGAGGGCTGCTGAAGTTCCTGGGTCGAAGA  
 AGAATCGGGTTGAAGTGAAGACTATAATGTCAGCGTCCCATCCTGGGCTTTAAGAAATTTATGTTGA  
 CTCATCTGGTGAACATAGATCAAGACACTTACAGTGTCTACAGATTTTTAAGAGTGAGTCTCACCCCTC  
 AGTGTACAAAGTGGCCAGTGGACTGAAGGAGGGGCTCAGCCTCTTTGGAATCCTCAACAGATGCCACTGT  
 AAGTGGGAGAGAAGCTGCTCAGGCTATGGTTCACACGTCGACTCATGACCTGGGGGAGCTCAGTTCTC  
 GTCTGGACGTCATTCAAGTTTTTCTGCTGCCCAAGATCTGGACATGGCTCAGATGCTGCATCGGCTCCT  
 GGGTCACATCAAGAACGTGCCTCTGATTCTGAAACGCATGAAGTGTCCACACCAAGGTCAGCGACTGG  
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 ATCTGGACTCCCGTATTCTTTCATGCAGTGTCTACATCCCTCTGATTGGCTTCTTCTTCTATTCC  
 CCGCTGCCTTCCATGGTAGAGGCCAGTACTTTGAGATTAATGGACTGGACTTCATGTTTCTCTCAGAG  
 GAGAAGCTGCACTATCGTAGTCCCGAACCAAGGAGCTGGATGCATTGCTGGGGACCTGCACTGCGAGA  
 TCCGGGACCAGGAGACGCTGCTGATGTACCAGCTACAGTCCAGGTGCTGGCACGAGCAGCTGTCTAAC  
 CCGAGTATTGGACCTTGCTCCCGCTGGACGTCCTGCTGGCTCTTGCCAGTGTGCCCGGACTATGGC  
 TACTCAAGGCCGGTTACTCCCCACAAGTCTTGGGGTACGAATCCAGAATGGCAGACATCCTCTGATGG  
 AACTCTGTGCCGAACCTTTGTGCCAACTCCACAGAATGTGGTGGGGACAAGGGAGGGTCAAAGTCAT  
 CACTGGACCCAATCATCAGGGAAGAGCATATACTCAAACAGGTAGGCTTGATCACATTCATGGCCCTG  
 GTAGGCAGCTTTGTGCCAGCAGAGGAGGCCGAAATTTGGGGCAGTAGACGCCATCTTCACACGAATTCATA  
 GCTGCGAATCCATCTCCCTTGGCCTCTCCACCTTCATGATCGACCTCAACCAGCAGGTGGCGAAAGCAGT  
 GAACAATGCCACTGCACAGTCGCTGGTCCTTATTGATGAATTTGGAAAGGGAACCAACACGGTGGATGG  
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 CCACCAACTTTCTGAGCCTTGTTTCAGCTACAACCTGCTGCCACAAGGGCCCTGGTGCAGTATTTGACCAT  
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 CCCATCAAGCCTGTCAAGGATTTGCTAAAGAAGAACCAATGGAAAATTGCCAGACATTAGTGGATAAGT  
 TTATGAAACTGGATTTGGAAGATCCTAACCTGGACTTGAACGTTTTTCATGAGCCAGGAAGTGTGCCTGC  
 TGCCACCAGCATCCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC224044 representing NM\_025259  
 Red=Cloning site Green=Tags(s)

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MASLGANPRRTPQGPRPGAASSGFPPAPVPGPREAAAAEEEEELAEIHLCVLWNSGYLGIAYYDTS
STIHFMPDAPDHESLKLQRLVDEINQSVVTSAKQDENMTRFLGKLASQEHREPKRPEIIFLPSVDFGL
EISKQRLLSGNYSFIPDAMTATEKILFLSSIIPFDCLLTPPGDLRFTPIPLLIPSQVRALGGLLKFGR
RIGVELEDYNVSVPILGFKKFM LHLVNIQDTYSVLQIFKSESHPSVYKVASGLKEGLSLFGILNRCH
KWGEKLLRLWFRPTHDLGELSSRLDVIQFFLLPQNLDMAQMLHRLLGHIKNVPLILKRMKLSHTKVSD
QVLYKTVYSALGLRDACRSLPQSIQLFRDIAQEFSDDLHIIASLIGKVVDFFEGSLAENRFTVLPNIDPE
DEKKRRLMGLPSFLEVARKELENLDSRIPSCSVIYIPLIGFLLSIPRLPSMVEASDFEINGLDFMFLSE
EKLHYRSARTKELDALLGDLHCEIRDQETLLMYQLQCQVLARA AVLTRVLDLASRLDVLLALASAARDYG
YSRPRYSPQVLGVRIQNGRPLMELCARTFVFNSTECGGDKGRVKVITGPNSSGKSIYLKQVGLITFMAL
VGSFVPAEEAEIGAVDAIFTRIHSCEISLGLSTFMIDLNQQVAKAVNNATAQSLVLIDFEGKGTNTVDG
LALLAAVLRHWLARGPTCPHIFVATNFLSLVQLQLLPQGPLVQYLTMETCEDGNDLVFFYQVSDLIRSGK
PIKPVKDLLKKNQMENCQTLVDFKMKLDLEDPNLDLNVFMSQEVLPAAATSIL
```

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:



ACCN: NM\_025259

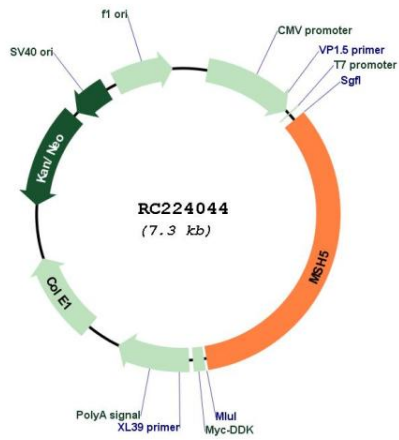
ORF Size: 2466 bp

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](mailto: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](#)

<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>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_025259.5</a> , <a href="#">NP_079535.4</a>
<b>RefSeq Size:</b>	2751 bp
<b>RefSeq ORF:</b>	2469 bp
<b>Locus ID:</b>	4439
<b>UniProt ID:</b>	<a href="#">O43196</a>
<b>Cytogenetics:</b>	6p21.33
<b>Domains:</b>	MutS_V, MutS_III, MutS_IV
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	91.9 kDa
<b>Gene Summary:</b>	<p>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 <i>Saccharomyces cerevisiae</i> 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]</p>

Product images:



Circular map for RC224044