

## Product datasheet for **MR226209**

### **Msh5 (NM\_013600) Mouse Tagged ORF Clone**

#### **Product data:**

|                           |                                         |
|---------------------------|-----------------------------------------|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | Msh5 (NM_013600) Mouse Tagged ORF Clone |
| Tag:                      | Myc-DDK                                 |
| Symbol:                   | Msh5                                    |
| Synonyms:                 | Mut5                                    |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-Entry (PS100001)                  |
| E. coli Selection:        | Kanamycin (25 ug/mL)                    |



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**ORF Nucleotide  
Sequence:**

&gt;MR226209 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

 TTTTGAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

 ATGGCTTTTCAGAGCGACCCAGGCCGACGCCCGGACCCGACCCAGATCCGGGATCCCTCAGCCA  
GCTTCCCCAGCCCTCAGCCCCAATGGCGGGGCTGGAGGTATCGAGGAAGAGGACGAGGAGGCCGCGC  
TGAGATCCATCTGTGCGTGCTGTGGAGCTCGGGATACCTGGGCATTGCTTACTATGACACTAGTGACTCC  
ACTATCCACTTCATGCCAGATGCCCCAGACCACGAGAGCCTAAAGCTTCTCCAGAGAGTTCTGGATGAAA  
TCAACCCCACTGCTGTTGTCAAGTGCCAAACAGGATGAGGCTATGACTCGATTCTAGGGAAGCTTGC  
CTCCGAGGAGCACAGAGAGCCAAAGGGACCTGAAATCATACTTCTGCCAAGCGTGGAATTTGGTCCAGAG  
ATAAGCAAACAGCGTCTCCTTTCCGAAACTACTCCTTCATCTCAGACTCCATGACTGCTACTGAGAAAA  
TCCTTTTCTCTCTCCATTATTCCTTTGACTGTGCTCCTCACGGTCCGGGCACTGGAGGACTGCTCAA  
GTTCTGAGTCGAAGAAGAATTGGGGTTGAAGTGAAGACTATGATGTTGGCGTCCCTATCTGGGATTC  
AAGAAGTTTGATTGACCCATCTGGTGAGCATAGATCAAGACACTTACAGCGTTTACAGATTTTCAAGA  
GTGAGTCTCACCCCTCGGTGTACAAAGTAGCCAGTGGGCTGAAGGAGGGGCTCAGCCTTTTTGGAATCCT  
CAACAGATGCCGCTGTAAGTGGGACAGAACTGCTCAGGCTGTGGTTTACACGTCCAACCCGGGAGCTA  
AGGGAACCTCAATCCCGACTGGATGTCATTAGTTCTTCTGATGCCTCAGAACCTGGACATGGCCAGAG  
TGCTGCACCGACTCCTGAGCCACATCAAGAATGTGCCTCTGATTCTGAAACGCATGAAGTTGTCCACAC  
CAAGGTCAGTGACTGGCAGGTCTCTACAAGACTGTGTACAGTGCTCTCGGCTGAGGGATGCCTGCCGT  
TCTCTGCCACAGTCCATCCAGCTTTTTCAGGACATTGCCAGGAGTTCTCTGACGACCTGCATCATTG  
CCAGCCTCATCGGAAGGTGGTGGACTTTGAGGAAAGTCTTGCTGAAAATCGCTTACAGTCTCCCTAA  
CATAGACCCTGACATAGATGCCAAGAAGCGAAGGCTGATAGGGCTCCGAGCTTCTCACTGAAGTTGCT  
CAGAAGGAGCTGGAGAACCTGGACTCTCGCATCCCTCATGCAGTGTCTACATCCCTCTGATTGGCT  
TCCTTCTTTCCATTCCCCGCTTGCTTTTCTGTTGGAAGCTAGTGACTTTGAGATTGAGGGGCTGGACTT  
CATGTTTCTCTCAGAGGACAAGCTGCACTATCGTAGCGCCCGACCAAGGAGCTGGACACGCTGCTGGGA  
GACCTGCACTGCGAGATCCGGGACCAAGGAGACCTGTTGATGTACCAGCTGCAGTGCCAGGTGCTGGCAC  
GGGCTTCGGTCTTGACTCGGTATTGGACCTTGCTCCCGCTGGACGCTCTGTTGGCTCTTGCCAGTGC  
TGCCCGGGACTACGGCTATTCGAGACCGCATTACTCTCCTGTATCCATGGAGTACGAATCAGGAATGGC  
AGGCATCTCTGGTGGAAGTGTGTGCACGAACCTTCGTGCCAACTCCACGAGTGTGGTGGGACCAAG  
GCAGGGTCAAAGTCATCACTGGGCCCAACTCCTCAGGGAAAAGCATATATCTCAAGCAGGTAGGCTTGAT  
CACTTTTATGGCCCTGGTGGGCAAGTTTCGTGCCTGCAGAGGAGGCCGAGATTGGGGTAATCGACGCCATC  
TTCACTCGAATTCACAGCTGCGAATCCATCTCCCTCGGCTCTCCACCTTCATGATTGATCTCAACCAGG  
TGGCGAAAGCAGTGAACAATGCCACAGAGCACTCGCTGGTCTGATCGATGAATTCGGGAAGGGACCAA  
CTCGGTGGATGGCTGGCACTTCTGGCTGCTGTGCTCCGTCACTGGCTAGCACTGGGACCCAGCTGCCCC  
CACGTCTTTGTAGCCACCAACTTCTGAGCCTGTTCACTGCACTGCTGCCGCAAGGACCCCTGGTGC  
AGTATTTGACCATGGAGACTTGTGAGGATGGGAAGACCTTGCTTCTTCTACCAGCTTTGCCAAGGCGT  
CGCCAGTGCCAGCCACGCTCCACACAGCGGCCAGGCTGGGCTTCTGACCCACTCATTGCTCGTGCC  
AAAGAGGTCTCAGACTTGATCCGAGTGGGAAACCCATCAAGGCCACGAATGAGCTTCTAAGGAGAAACC  
AAATGGAAGTCCAGGCACTGGTGGATAAGTTTCTAAAGTGGACTTGAGGATCCCACCTGGACCT  
GGACATTTTCATTAGTCAGGAAGTGTGCCGCTGCTCCACCATCCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR226209 protein sequence

Red=Cloning site Green=Tags(s)

MAFRATPGRTPPGPGPRSGIPASFPSPQPPMAGPGGIEEEDDEEPAEIHLCVLWSSGYLGIAYYDTS  
 TIHFMPDAPDHESLKLQRLDEINPQSVVTSKQDEAMTRFLGKLASEEHREPKEIILLPSVDFGPE  
 ISKQRLLSGNYSFISDSMTATEKILFLSSIIPFDCVLTVRALGGLLKFLSRRRIGVELEDYDVGPILGF  
 KKFVLTHLVSIDQDTYSVLQIFKSESHPSVYKVASGLKEGLSLFGILNRCRCCKWGQKLLRLWFTPTREL  
 RELNSRLDVIQFFLMPQNLDMAQMLHRLLSHIKNVPLILKRMKLSHTKVSDWQVLYKTVYSALGLRDACR  
 SLPQSIQLFQDIAQEFSDDLHHIASLIGKVDFEESLAENRFTVLPNIDPDIDAKKRRRLIGLPSFLTEVA  
 QKELENLDSRIPSCSVIYIPLIGFLLSIPRLPFMVEASDFEIEGLDFMFLSEDKLHYRSARTKELDTLLG  
 DLHCEIRDQETLLMYQLQCQVLARASVLRVLDLASRLDVLLALASAARDYGYSRPHYSPIHGVRIRNG  
 RHPLVELCARTFVPNSTDCGGDQGRVKVITGPNSSGKSIYKQVGLITFMALVGSFVPAEEAEIGVIDAI  
 FTRIHSCESISLGLSTFMIDLNQVAKAVNNATEHSLVLIDFEGKGTNSVDGLALLAAVLRHWLALGPSCP  
 HVFVATNFLSLVQLQLLPQGPLVQYLTMETCEDGEDLVFFYQLCQGVASASHASHTAAQAGLPDPLIARG  
 KEVSDLIRSGKPIKATNELLRRNQMCQALVDKFLKLDLEDPTLDLDFISQEVLPAAPTIL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfi-MluI

Cloning Scheme:



|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCN:           | NM_013600                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ORF Size:       | 2499 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. <a href="#">More info</a> |
| 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_013600.1](#), [NM\\_013600.2](#), [NM\\_013600.3](#), [NP\\_038628.2](#)

**RefSeq Size:** 2888 bp

**RefSeq ORF:** 2502 bp

**Locus ID:** 17687

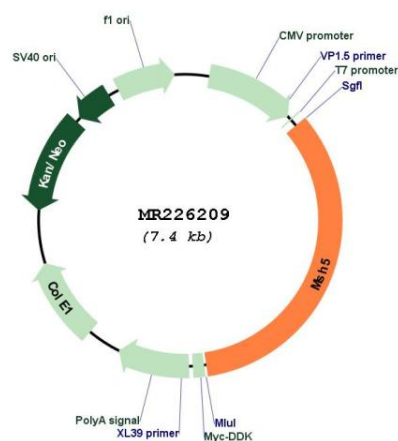
**UniProt ID:** [Q9QUM7](#)

**Cytogenetics:** 17 18.57 cM

**MW:** 92.6 kDa

**Gene Summary:** This gene encodes a member of the MutS family of proteins that play critical roles in DNA mismatch repair and meiotic homologous recombination processes. Mice lacking the encoded protein are viable but sterile, with severe defects in spermatogenesis in males and complete loss of ovarian structures in females. Mutations in a similar gene in humans have been shown to cause common variable immune deficiency (CVID) and immunoglobulin A deficiency. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Jan 2015]

## Product images:



Circular map for MR226209