

## Product datasheet for **MG226209**

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

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                     |
| Product Name:             | Msh5 (NM_013600) Mouse Tagged ORF Clone |
| Tag:                      | TurboGFP                                |
| Symbol:                   | Msh5                                    |
| Synonyms:                 | Mut5                                    |
| Mammalian Cell Selection: | Neomycin                                |
| Vector:                   | pCMV6-AC-GFP (PS100010)                 |
| E. coli Selection:        | Ampicillin (100 ug/mL)                  |



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ORF Nucleotide  
Sequence:

>MG226209 representing NM\_013600  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGCTTTCAGAGCGACCCAGGCCGACGCCCGGGACCCGGACCCAGATCCGGGATCCCTCAGCCA  
GCTTCCCAGCCCTCAGCCCCAATGGCGGGCCCTGGAGGTATCGAGGAAGAGGACGAGGAGGAGCCCGC  
TGAGATCCATCTGTGCGTGCTGTGGAGCTCGGGATACCTGGGCATTGCTTACTATGACACTAGTGACTCC  
ACTATCCACTTTCAGCAGATGCCAGATGCCAGACACGAGAGCCTAAAGCTTCTCCAGAGAGTTCTGGATGAAA  
TCAACCCCAAGTCTGTTGTCAAAAGTGCCAAACAGGATGAGGCTATGACTCGATTCTAGGGAAGCTTGC  
CTCCGAGGAGCACAGAGAGCCAAAGGGACCTGAAATCATACTTCTGCCAAGCGTGGATTTTGGTCCAGAG  
ATAAGCAAACAGCGTCTCCTTTCCGAAACTACTCCTTCATCTCAGACTCCATGACTGCTACTGAGAAAA  
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CAACAGATGCCGCTGTAAGTGGGGACAGAAGCTGCTCAGGCTGTGGTTTACACGTCCAACCCGGGAGCTA  
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TGCCCGGGACTACGGCTATTCGAGACCGCATTACTCTCCCTGTATCCATGGAGTACGAATCAGGAATGGC  
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CACTTTTATGGCCCTGGTGGCAGTTTCGTGCCTGCAGAGGAGGCCGAGATTGGGGTAATCGACGCCATC  
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AAATGGAAAACCTGCCAGGCACTGGTGGATAAGTTTCTAAAACCTGGACTTGAGGATCCCACCCTGGACCT  
GGACATTTTATTAGTACGAAGTGTGCCGCTGCTCCACCATCCTC

**ACGGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

## Protein Sequence:

&gt;MG226209 representing NM\_013600

Red=Cloning site Green=Tags(s)

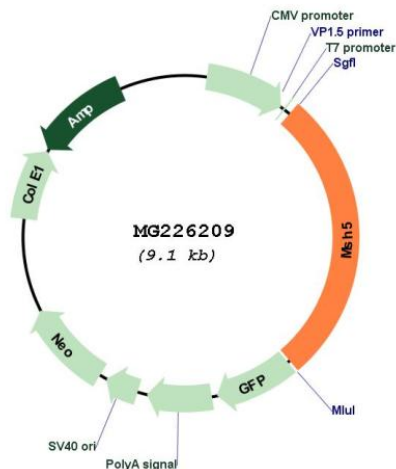
MAFRATPGRTPPGPGPRSGIPASAFPSPQPPMAGPGGIEEEDDEEPAEIHLCVLWSSGYLGIAYYDTS  
SDS  
TIHFMPDAPDHESLKLLQRVLDEINPQSVVTSKQDEAMTRFLGKLASEEHREPKEIILLPSVDFGPE  
ISKQRLLSGNYSFISDSMTATEKILFLSSIIPFDCVLTVRALGGLLKFLSRRRIGVELEDYDVGVPI  
LGF  
KKFVLTHTLVSIDQDTYSVLQIFKSESHPSVYKVASGLKEGLSLFGILNRCRCKWGQKLLRLW  
FTRPTREL  
RELNSRLDVIQFFLMPQNLDMAQMLHRLLSHIKVNPLILKRMKLSHTKVSDWQVLYKTVYSAL  
GLRDACR  
SLPQSIQLFQDIAQEFSDDLHHIASLIGKVDFEESLAENRFTVLPNIDPDIDAKRRLIGLPSFL  
TEVA  
QKELENLDSRIPSCSVIYIPLIGFLLSIPRLPFMVEASDFEIEGLDFMFLSEDKLHYRSARTKEL  
DTLLG  
DLHCEIRDQETLLMYQLQCQVLRASVLRVLDLASRLDVLLALASAARDYGYSRPHYSPIHGVR  
IRNG  
RHPLVELCARTFVPNSTDCGGDQGRVKVITGPNSSGKSIYKQVGLITFMALVGSFVPAEEAEI  
GVIDAI  
FTRIHSCEISLGLSTFMIDLNQVAKAVNNATEHSLVLIDFEGKGTNSVDGLALLAAVLRHWL  
ALGPSCP  
HVFVATNFLSLVQLQLLPQGPLVQYLTMETCEDGEDLVFFYQLCQGVASASHASHTAAQAGL  
PDPLIARG  
KEYVSDLIRSGKPIKATNELLRRNQMENCQALVDKFLKLDLEDPTLDLDFISQEVLPAAPTIL

TRTRPLE - GFP Tag - V

## Restriction Sites:

Sgfl-MluI



**Plasmid Map:**


**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. [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\\_013600.2](#), [NP\\_038628.2](#)

**RefSeq Size:** 2888 bp

**RefSeq ORF:** 2502 bp

**Locus ID:** 17687

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

**Cytogenetics:** 17 18.57 cM

**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]