

## Product datasheet for **SC337819**

### **MSH6 (NM\_001281494) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MSH6 (NM_001281494) Human Untagged Clone
Tag:	Tag Free
Symbol:	MSH6
Synonyms:	GTBP; GTMBP; HNPCC5; HSAP; MMRCS3; p160
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_001281494, the custom clone sequence may differ by one or more nucleotides

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ATGGTGACTGGAATGGCTCTCTTAAAAGGAAAAGCTCTAGGAAGGAAACGCCCTCAGCCACCAACAAG
CAACTAGCATTTTCATCAGAAACCAAGAATACTTTGAGAGCTTTCTCTGCCCTCAAATTTCTGAATCCCA
AGCCACGTTAGTGGAGGTGGTATGACAGTAGTCGCCCTACTGTTTGGTATCATGAAACTTTAGAATGG
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ACTACGATTATTTGCGGAAGTTTGCCTGGCTAGTAAAAGGTCAACTGTAGATGCTGAAGCTGTCCATAAA
TTGCTGACTTTGATTAAGGAATTAAG
    
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<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_001281494
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>	<u><a href="#">NM_001281494.1</a></u> , <u><a href="#">NP_001268423.1</a></u>
<b>RefSeq Size:</b>	4082 bp
<b>RefSeq ORF:</b>	3177 bp
<b>Locus ID:</b>	2956
<b>UniProt ID:</b>	<u><a href="#">P52701</a></u>
<b>Cytogenetics:</b>	2p16.3
<b>Protein Families:</b>	Druggable Genome, Stem cell - Pluripotency
<b>Protein Pathways:</b>	Colorectal cancer, Mismatch repair, Pathways in cancer

**Gene Summary:**

This gene encodes a member of the DNA mismatch repair MutS family. In *E. coli*, 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]

Transcript Variant: This variant (4) contains an alternate exon in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at a downstream start codon compared to variant 1. The encoded isoform (3) is shorter and has a distinct N-terminus compared to isoform 1. Variants 3 and 4 encode the same protein (isoform 3). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.