

# Recombinant Human MSH3 Protein, His-tagged

**Cat. No.** MSH3-494H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human MSH3 protein with a His-tag was expressed in E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>      | The protein encoded by this gene forms a heterodimer with MSH2 to form MutS beta, part of the post-replicative DNA mismatch repair system. MutS beta initiates mismatch repair by binding to a mismatch and then forming a complex with MutL alpha heterodimer. This gene contains a polymorphic 9 bp tandem repeat sequence in the first exon. The repeat is present 6 times in the reference genome sequence and 3-7 repeats have been reported. Defects in this gene are a cause of susceptibility to endometrial cancer. |
| <b>Molecular Mass</b>   | The protein has a calculated MW of 40.3 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>AA Sequence</b>      | MGSSHHHHHHSSGLVPRGSHMSRRKPASGGLAASSAPARQAVLSRFFQSTGSLK<br>STSSSTGAADQVDPGAAAAAAAAAATAPPAPPAPAFPPQLPPHATEIDRRKKRPLE<br>NDGPVKKKKVKKVQKKEGSDLGMSGNSEPKKCLRTRNVSKSLEKLKEFCCDSALP<br>QSRVQTESLQERFAVLPKCTDFDDISLLHAKNAVSSSEDSKRQINQKDTTLFDLSQFG<br>SSNTSHENLQKTASKSANKRSKSIYTPLELQYIEMKQQHKDAVLCVECGYKYRFFGE<br>DAEIAARELNICHLDHNFMTASIPTHRLFVHVRRLVAKGYKGVVKQTETAALKAIG<br>DNRSSLFSRKLTAlyTKSTLIGEDVNPLIKL                                                                                                                      |
| <b>Endotoxin</b>        | <1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                       |                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | EU/μg                                                                                                                                                               |
| <b>Purity</b>         | >85% by SDS-PAGE                                                                                                                                                    |
| <b>Storage</b>        | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| <b>Storage Buffer</b> | Lyophilized from sterile PBS, Ph7.4, 5% trehalose, 5% mannitol added with 0.25M Arginine                                                                            |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | MSH3 mutS homolog 3 (E. coli) [ Homo sapiens (human) ]                                                                                                                                                                                            |
| <b>Official Symbol</b> | MSH3                                                                                                                                                                                                                                              |
| <b>Synonyms</b>        | MSH3; mutS homolog 3 (E. coli); mutS (E. coli) homolog 3; DNA mismatch repair protein Msh3; Divergent upstream protein; DUP; Mismatch repair protein 1; MRP1; hMSH3; mismatch repair protein 1; divergent upstream protein; MGC163306; MGC163308; |
| <b>Gene ID</b>         | 4437                                                                                                                                                                                                                                              |
| <b>mRNA Refseq</b>     | NM_002439                                                                                                                                                                                                                                         |
| <b>Protein Refseq</b>  | NP_002430                                                                                                                                                                                                                                         |
| <b>MIM</b>             | 600887                                                                                                                                                                                                                                            |
| <b>UniProt ID</b>      | P20585                                                                                                                                                                                                                                            |

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