

Product datasheet for TP511249

Msh2 (NM_008628) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse mutS homolog 2 (Msh2), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR211249 protein sequence Red=Cloning site Green=Tags(s)

MAVQPKETLQLEGAAEAGFVRRFFEGMPEKPSTTVRLFDRGDFYTAHGEDALLAAREVFKTQGVIKYMGPA
GSKTLQSVLSKMNFEFVKDLLVRQYRVEVYKKNKAGNKASKENEWYLFKASPGNLSQFEDILFGNND
MSASVGMGIKMAVVDGQRHVGVGYVDSTQRKLGCEFPENDQFSNLEALLIQGPKCEVLPGETTGDM
GKLRQVIQRGGILITERKRADFSTKDIYQDLNRLKGGKGEQINSAALPEMENQVAVSSLSAVIKFLELL
SDDSNFGQFELATFDFSQYMKLDMAAVRALNLFQGSVEDTTGSQSLAALLNKCKTAQGQRLVNQWIKQPL
MDRNRIEERLNLVEAFVEDSELRQSLQEDLLRRFPDLNRLAKKFQRQAANLQDCYRLYQGINQLPSVIQA
LEKYGRHQALLAVFVTPIDLRSDFSKFQEMIETLDMQVENHEFLVKPSFDPNLSSELREVMGLEK
KMQSTLINAARGLGLDPGKQIKLDSSAQFGYFRVTCKEEKVLRNNKNFSTVDIQKNGVKFTNSELSSLN
EYTKNKGEEYEAQDAIVKEIVNISSGYVEPMQTLNDVLAHLDAIVSFAHVSNAAPVYPVVPVILEKGGK
RIILKASRHACVEVQDEVAFIPNDVHFEKDKQMFHIITGPNMGGKSTYIRQTGVIVLMAQIGCFVPCESA
EVSIVDCILARVGAGDSQLKGVSTFMAEMLETASILRSATKDSLIIIDELGRGTSTYDGFGLAWAISDYI
ATKIGAFCMFATHFHELTALANQIPTVNNLHVLTALTTEETLTMLYQVKKGVCDQSFQIHVAELANFPRHV
IACAQKALEEEFNIGTSLGCDEAEPAAKRRCLEREQGEKIILEFLSKFKQVPFTAMSEESISAKLKQ
LKAENVAKNNSFVNEIISRIKAPAP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-MYC/DDK
Predicted MW:	104.2 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol



[View online »](#)

Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_032654
Locus ID:	17685
UniProt ID:	P43247 , Q3TZI5
RefSeq Size:	3056
Cytogenetics:	17 57.87 cM
RefSeq ORF:	2808
Synonyms:	A1788990
Summary:	<p>Component of the post-replicative DNA mismatch repair system (MMR). Forms two different heterodimers: MutS alpha (MSH2-MSH6 heterodimer) and MutS beta (MSH2-MSH3 heterodimer) which binds to DNA mismatches thereby initiating DNA repair. When bound, heterodimers bend the DNA helix and shields approximately 20 base pairs. MutS alpha recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. MutS beta recognizes larger insertion-deletion loops up to 13 nucleotides long. After mismatch binding, MutS alpha or beta forms a ternary complex with the MutL alpha heterodimer, which is thought to be responsible for directing the downstream MMR events, including strand discrimination, excision, and resynthesis. Recruits DNA helicase MCM9 to chromatin which unwinds the mismatch containing DNA strand. ATP binding and hydrolysis play a pivotal role in mismatch repair functions. The ATPase activity associated with MutS alpha regulates binding similar to a molecular switch: mismatched DNA provokes ADP-->ATP exchange, resulting in a discernible conformational transition that converts MutS alpha into a sliding clamp capable of hydrolysis-independent diffusion along the DNA backbone. This transition is crucial for mismatch repair. MutS alpha may also play a role in DNA homologous recombination repair. In melanocytes may modulate both UV-B-induced cell cycle regulation and apoptosis.</p> <p>[UniProtKB/Swiss-Prot Function]</p>