

MSH6 Antibody
Rabbit mAb
Catalog # AP90167

Specification

MSH6 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	P52701
Reactivity	Rat
Clonality	Monoclonal
Other Names	
MSH6; GTBP; HNPCC5; HSAP; p160;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	152786 Da

MSH6 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MSH6
Description	The DNA mismatch repair system (MMR) repairs post-replication DNA, inhibits recombination between nonidentical DNA sequences, and induces both checkpoint and apoptotic responses following certain types of DNA damage. MSH2 (MutS homologue 2) forms the hMutS- α dimer with MSH6 and is an essential component of the mismatch repair process.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

MSH6 Antibody - Protein Information

Name MSH6 ([HGNC:7329](#))

Synonyms GTBP

Function

Component of the post-replicative DNA mismatch repair system (MMR). Heterodimerizes with MSH2 to form MutS alpha, which binds to DNA mismatches thereby initiating DNA repair. When bound, MutS alpha bends the DNA helix and shields approximately 20 base pairs, and recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. After mismatch binding, 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. 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 \rightarrow 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. Recruited on chromatin in G1 and early S phase via its PWWP domain that specifically binds trimethylated 'Lys-36' of histone H3 (H3K36me3): early recruitment to chromatin to be replicated allowing a quick identification of mismatch repair to initiate the DNA mismatch repair reaction.

Cellular Location

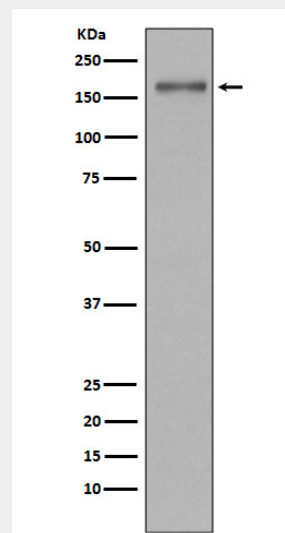
Nucleus. Chromosome. Note=Associates with H3K36me3 via its PWWP domain

MSH6 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MSH6 Antibody - Images



Western blot analysis of MSH6 in SW480 cell lysate.