

MSH6 Antibody

Rabbit mAb Catalog # AP90167

Product Information

Application WB, IHC, IF, ICC, IHF

Primary Accession P52701

Reactivity Rat, Human, Mouse

Clonality Monoclonal

Other Names MSH6; GTBP; HNPCC5; HSAP; p160;

IsotypeRabbit IgGHostRabbitCalculated MW152786

Additional Information

Dilution WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200

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.

Protein Information

Name MSH6 (<u>HGNC:7329</u>)

Synonyms GTBP

Function Component of the post-replicative DNA mismatch repair system (MMR).

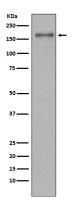
Heterodimerizes with MSH2 to form MutS alpha, which binds to DNA mismatches thereby initiating DNA repair. When bound, MutS alpha bends the DNA helix and shields approximately 20 base pairs, and recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. After mismatch 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-->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

Images



Western blot analysis of MSH6 in SW480 cell lysate.

Image not found: 202311/AP90167-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using MSH6 Antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.