

MSH6 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51369**Specification**

MSH6 Antibody - Product Information

Application	WB, ICC, IHC-P, E
Primary Accession	P52701
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	160 KDa

MSH6 Antibody - Additional Information**Gene ID** 2956**Other Names**

DNA mismatch repair protein Msh6, hMSH6, G/T mismatch-binding protein, GTBP, GTMBP, MutS-alpha 160 kDa subunit, p160, MSH6, GTBP

Dilution

WB~~1:1000
ICC~~N/A
IHC-P~~N/A
E~~N/A

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

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

MSH6 Antibody - Background

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.

MSH6 Antibody - References

Acharya S., et al. Proc. Natl. Acad. Sci. U.S.A. 93:13629-13634(1996).
Shiwaku H.O., et al. DNA Res. 4:359-362(1997).
Palombo F., et al. Science 268:1912-1914(1995).
Nicolaidis N.C., et al. Genomics 31:395-397(1996).
Drummond J.T., et al. Science 268:1909-1912(1995).