

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

**Specification**

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**MSH6 Antibody - Product Information**

Application	<b>WB, ICC, IHC-P, E</b>
Primary Accession	<a href="#">P52701</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>160 KDa</b>

**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

**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-->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**

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#### **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).