

# MSH6

Rabbit Monoclonal antibody(Mab)

Catalog # AD80195

## Product Information

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Application	IHC-P
Primary Accession	<a href="#">P52701</a>
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Clone Names	821G2C1
Calculated MW	152786

## Additional Information

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Gene ID	2956
Gene Name	MSH6 ( <a href="#">HGNC:7329</a> )
Other Names	DNA mismatch repair protein Msh6, MutS-alpha 160 kDa subunit, p160, MSH6 ( <a href="#">HGNC:7329</a> ), GTBP
Dilution	IHC-P~~Ready-to-use
Storage	Maintain refrigerated at 2-8°C.
Precautions	MSH6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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Name	MSH6 ( <a href="#">HGNC:7329</a> )
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

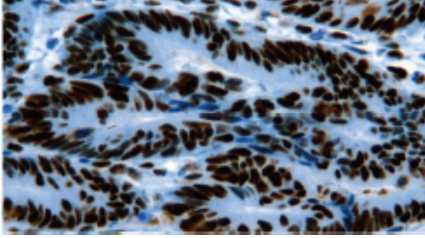
in G1 and early S phase via its PWWP domain that specifically binds trimethylated 'Lys-36' of histone H3 (H3K36me3): early recruitment to chromatin to be replicated allowing a quick identification of mismatch repair to initiate the DNA mismatch repair reaction.

#### Cellular Location

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

#### Images

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