

**Anti-MSH2 Antibody**  
**Mouse monoclonal antibody to MSH2**  
**Catalog # AP61621****Specification**

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**Anti-MSH2 Antibody - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">P43246</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Calculated MW	<b>104743</b>

**Anti-MSH2 Antibody - Additional Information****Gene ID** 4436**Other Names**

DNA mismatch repair protein Msh2; hMSH2; MutS protein homolog 2

**Target/Specificity**

Recognizes endogenous levels of MSH2 protein.

**Format**

Mouse IgG. Liquid in PBS containing 50% glycerol, 0.2% BSA and 0.09% (W/V) sodium azide.

**Storage**

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

**Anti-MSH2 Antibody - Protein Information****Name** MSH2**Function**

Component of the post-replicative DNA mismatch repair system (MMR). Forms two different heterodimers: MutS alpha (MSH2-MSH6 heterodimer) and MutS beta (MSH2-MSH3 heterodimer) which binds to DNA mismatches thereby initiating DNA repair. When bound, heterodimers bend the DNA helix and shields approximately 20 base pairs. MutS alpha recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. MutS beta recognizes larger insertion-deletion loops up to 13 nucleotides long. After mismatch binding, MutS alpha or beta 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. Recruits DNA helicase MCM9 to chromatin which unwinds the mismatch containing DNA strand (PubMed: <http://www.uniprot.org/citations/26300262> target="\_blank">26300262</a>). 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. In melanocytes may modulate both UV-B-induced cell cycle regulation and apoptosis.

**Cellular Location**

Nucleus. Chromosome

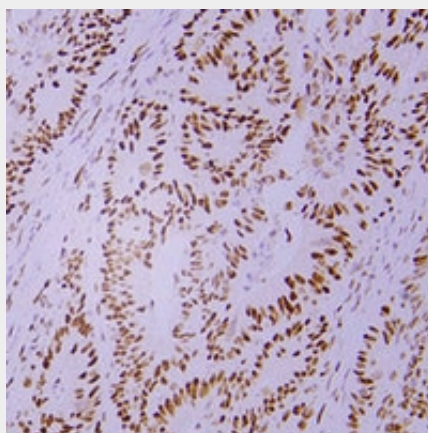
**Tissue Location**

Ubiquitously expressed.

**Anti-MSH2 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](#)

**Anti-MSH2 Antibody - Images**

Immunohistochemical analysis of MSH2 staining in human colon carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

**Anti-MSH2 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within human MSH2. The exact sequence is proprietary.