10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MSH2 Antibody
Rabbit mAb
Catalog # AP91499

Specification

MSH2 Antibody - Product Information

Application	**WB, FC**
Primary Accession	P43246
Clonality	**Monoclonal**

Other Names
DNA mismatch repair protein Msh2; hMSH2; MutS protein homolog 2; MSH2; COCA1; LCFS2;

Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**104743 Da**

MSH2 Antibody - Additional Information

Dilution	**WB~~1:1000** **FC~~1:10~50**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human MSH2**
Description	**MSH2 (MutS homologue 2) forms the hMutS-α dimer with MSH6 and is an essential component of the mismatch repair process. hMutS-α is part of the BRCA1-associated surveillance complex (BASC), a complex that also contains BRCA1, MLH1, ATM, BLM, PMS2 proteins and the Rad50-Mre11-NBS1 complex.**
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.**

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:26300262). 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

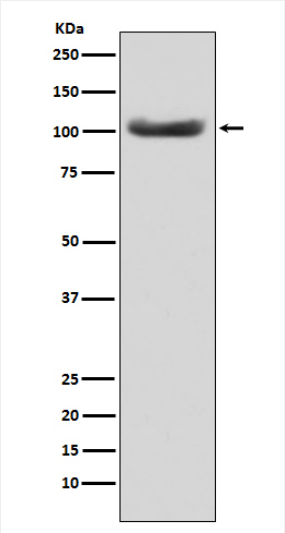
Tissue Location
Ubiquitously expressed.

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 Cytomety
- Cell Culture

MSH2 Antibody - Images



Western blot analysis of MSH2 expression in HeLa cell lysate.