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

MSH2 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52824

Specification

MSH2 Antibody - Product Information

Application	**WB**
Primary Accession	P43246
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2b**
Calculated MW	**100 KDa**

MSH2 Antibody - Additional Information

Gene ID 4436

Other Names
BAT26;COCA 1;COCA1;DNA mismatch repair protein Msh2;FCC 1;FCC1;hMSH2;HNPCC 1;HNPCC;HNPCC1;LCFS2;MSH 2;Msh2;MSH2_HUMAN;MutS homolog 2;MutS homolog 2 colon cancer nonpolyposis type 1;MutS protein homolog 2.

Dilution
WB~~1:1000

Format
Purified mouse monoclonal antibody in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

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

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:<a href="http://www.uniprot.org/citations/26300262"

target="_blank">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

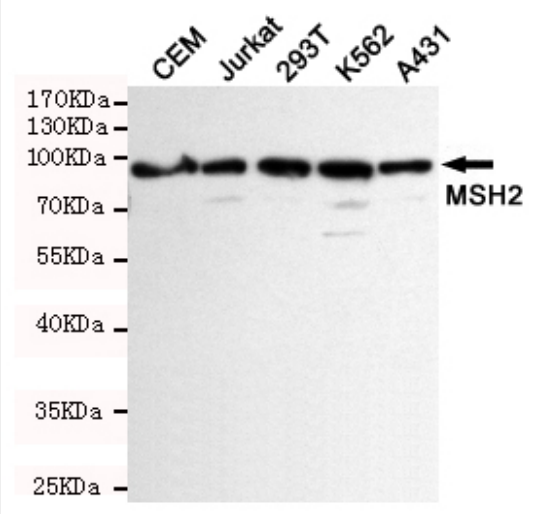
Tissue Location
Ubiquitously expressed.

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 detection of MSH2 in K562,CEM,Jurkat,293T and A431 cell lysates using MSH2 mouse mAb (1:1000 diluted).Predicted band size:100KDa.Observed band size:100KDa.

MSH2 Antibody - Background

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. 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.

MSH2 Antibody - References

Fishel R.,et al.Cell 75:1027-1038(1993).
Fishel R.,et al.Cell 77:167-167(1994).
Leach F.S.,et al.Cell 75:1215-1225(1993).
Kolodner R.D.,et al.Genomics 24:516-526(1994).
Wijnen J.,et al.Am. J. Hum. Genet. 56:1060-1066(1995).