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MSH2
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22400a

Specification

MSH2 - Product Information

Application	**WB,E**
Primary Accession	P43246
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**104743**

MSH2 - Additional Information

Gene ID 4436

Other Names
DNA mismatch repair protein Msh2, hMSH2, MutS protein homolog 2, MSH2

Target/Specificity
This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between amino acids from human.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
MSH2 is for research use only and not for use in diagnostic or therapeutic procedures.

MSH2 - 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

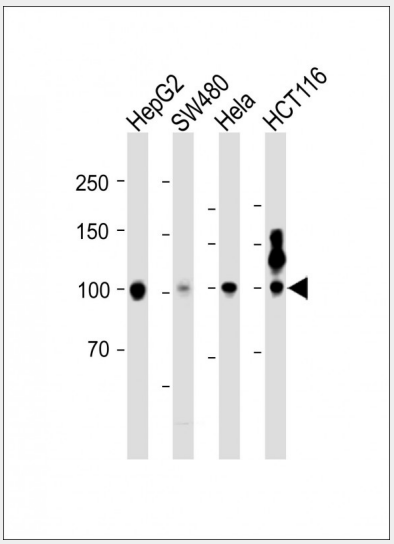
Tissue Location
Ubiquitously expressed.

MSH2 - 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 - Images



All lanes: Anti-MSH2 antibody at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: SW480 whole cell lysate Lane 3: Hela whole cell lysate Lane 4: HCT116 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) E42at 1/15000 dilution. Observed band size: 105KDa Blocking/Dilution buffer: 5% NFDM/TBST.

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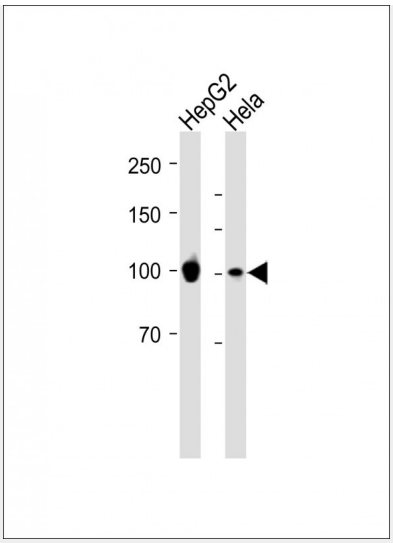

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MSH2 - Background

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MSH2 - 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).