



MSH₂

Rabbit Monoclonal antibody(Mab)
Catalog # AD80194

Specification

MSH2 - Product info

Application IHC-P
Primary Accession P43246
Reactivity Human
Host Rabbit
Clonality Monoclonal
Calculated MW 104743

MSH2 - Additional info

Gene ID 4436 Gene Name MSH2

Other Names

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

Dilution

IHC-P~~Ready-to-use

Storage

Maintain refrigerated at 2-8°C

Precautions MSH2 Antibody 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



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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 containg 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.

Nucleus. Chromosome Ubiquitously expressed.

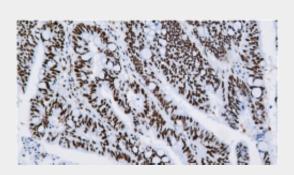
Cellular Location Tissue Location

MSH2 - Protocols

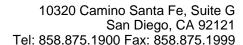
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

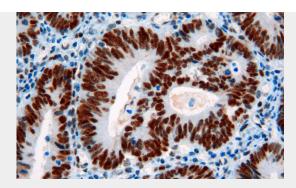
MSH2 - Images



Colon cancer







Immunohistochemical analysis of paraffin-embedded colorectal carcinoma; tissue using AD80194 performed on the Abcarta® FAIP-30 Fully automated IHC platform. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(Ready-to-use) for 15 min at room temperature. AmpSeeTM Detection Systems Abcepta: AR005 was used as the secondary antibody.