

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**

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
Tissue Location

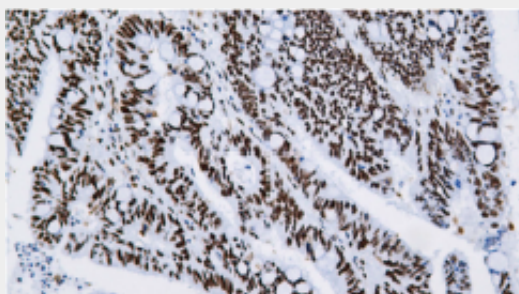
Nucleus. Chromosome
Ubiquitously expressed.

MSH2 - Protocols

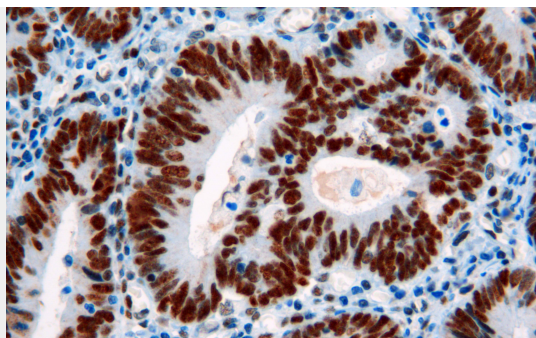
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [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. AmpSee™ Detection Systems [Abcepta:AR005] was used as the secondary antibody.