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MSH2

Rabbit Monoclonal antibody(Mab)
Catalog # AD80194

Product Information

Application	IHC-P
Primary Accession	P43246
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal
Clone Names	644G5A4
Calculated MW	104743

Additional Information

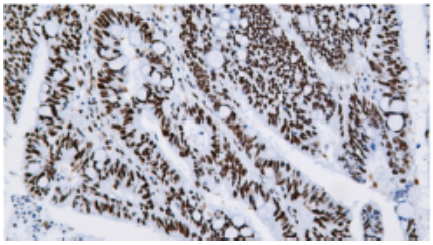
Gene ID	4436
Gene Name	MSH2
Other Names	DNA mismatch repair protein Msh2, hMSH2, MutS protein homolog 2, MSH2
Dilution	IHC-P~~Ready-to-use
Storage	Maintain refrigerated at 2-8°C.
Precautions	MSH2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Images



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