

Anti-MSH2 Monoclonal Antibody

Catalog # ABO14485

Product Information

Application	WB, FC
Primary Accession	P43246
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-MSH2 Monoclonal Antibody . Tested in WB, Flow Cytometry applications. This antibody reacts with Human.

Additional Information

Gene ID	4436
Other Names	DNA mismatch repair protein Msh2, hMSH2, MutS protein homolog 2, MSH2
Calculated MW	104743
Application Details	WB 1:500-1:2000 FC 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ACIH-13
Immunogen	A synthesized peptide derived from human MSH2 MSH2 (MutS homologue 2) forms the hMutS- Alpha dimer with MSH6 and is an essential component of the mismatch repair process. hMutS- Alpha is part of the BRCA1-associated surveillance complex (BASC), a complex that also contains BRCA1, MLH1, ATM, BLM, PMS2 proteins and the Rad50-Mre11-NBS1 complex.
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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.

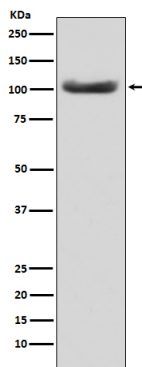
Cellular Location

Nucleus. Chromosome

Tissue Location

Ubiquitously expressed.

Images



Western blot analysis of MSH2 expression in HeLa cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.