

**Anti-MSH2 Monoclonal Antibody**  
Catalog # ABO14485

**Specification**

**Anti-MSH2 Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	<a href="#">P43246</a>
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.

**Anti-MSH2 Monoclonal Antibody - Additional Information**

**Gene ID** 4436

**Other Names**

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

**Application Details**

WB 1:500-1:2000<br>FC 1:50

**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.

**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.**

**Anti-MSH2 Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/26300262" target="\_blank">26300262</a>). 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

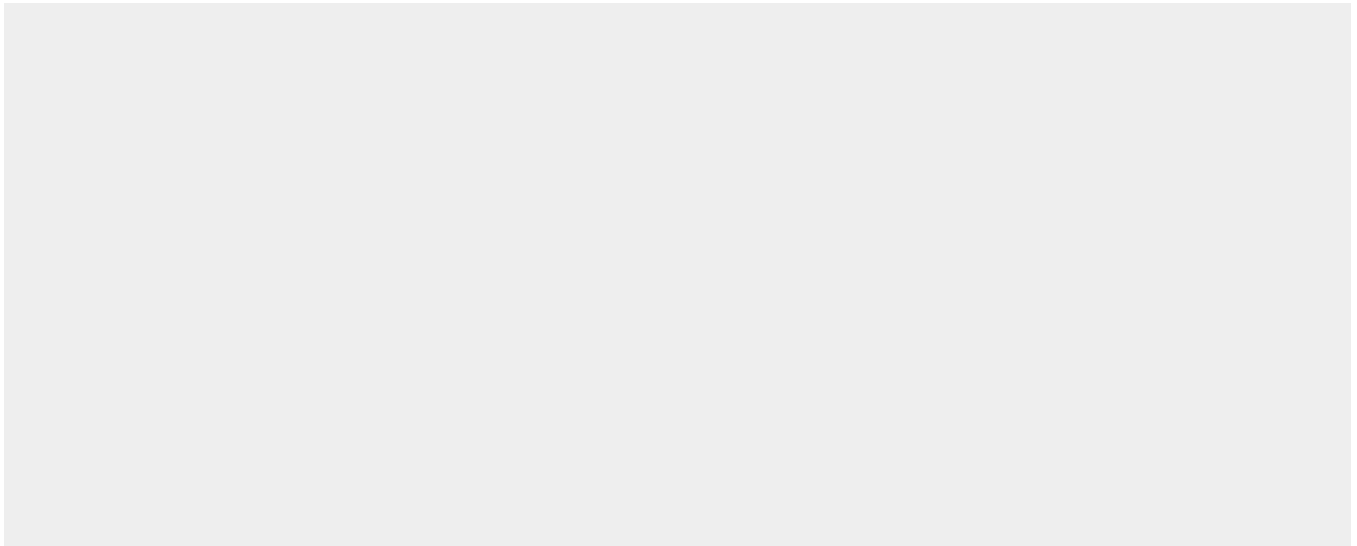
Ubiquitously expressed.

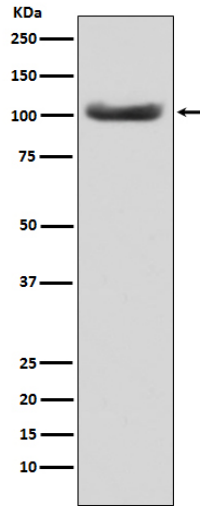
### Anti-MSH2 Monoclonal Antibody - Protocols

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](#)

### Anti-MSH2 Monoclonal Antibody - Images





Western blot analysis of MSH2 expression in HeLa cell lysate.