

## MSH2 monoclonal antibody

Catalog: MB9367

Host: Mouse

Reactivity: Human, Rat

### BackGround:

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 re-synthesis. Recruits DNA helicase MCM9 to chromatin which unwinds the mismatch containing DNA strand. 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.

### Product:

Mouse IgG2b, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2

### Molecular Weight:

104 kDa

### Swiss-Prot:

P43246(Human) P54275(Rat)

### Purification&Purity:

ProG purified.

### Applications:

WB:1:2,000-1:5,000

IHC:1:100-1:500

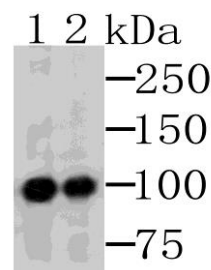
### Storage&Stability:

Store at +4 °C after thawing. Aliquot store at -20 °C. Avoid repeated freeze / thaw cycles.

### Specificity:

MSH2 monoclonal antibody detects endogenous levels of MSH2 protein.

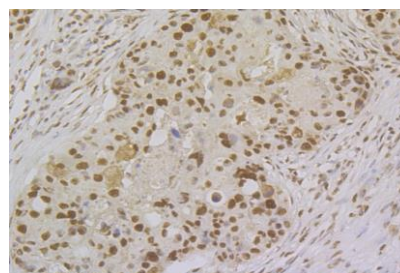
### DATA:



Western blot analysis of MSH2 on K562 cells lysates using anti-MSH2 antibody.

Lane 1: Anti-MSH2 antibody, 1:500.

Lane 2: Anti-MSH2 antibody, 1:5,000.



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue using anti-MSH2 antibody. Counter stained with hematoxylin. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) for 20 mins.

### Note:

For research use only, not for use in diagnostic procedure.

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## PRODUCT DATA SHEET

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