

Anti-MSH2 Picoband Antibody
Catalog # ABO11975**Specification**

Anti-MSH2 Picoband Antibody - Product Information

Application	WB, IHC-P, ICC
Primary Accession	P43246
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for DNA mismatch repair protein Msh2(MSH2) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-MSH2 Picoband Antibody - Additional Information

Gene ID 4436

Other Names

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

Calculated MW

104743 MW KDa

Application Details

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse

Subcellular Localization

Nucleus .

Tissue Specificity

Ubiquitously expressed. .

Protein Name

DNA mismatch repair protein Msh2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen

E.coli-derived human MSH2 recombinant protein (Position: Q337-N583). Human MSH2 shares 94% and 93% amino acid (aa) sequence identity with mouse and rat MSH2, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the DNA mismatch repair MutS family.

Anti-MSH2 Picoband 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: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.

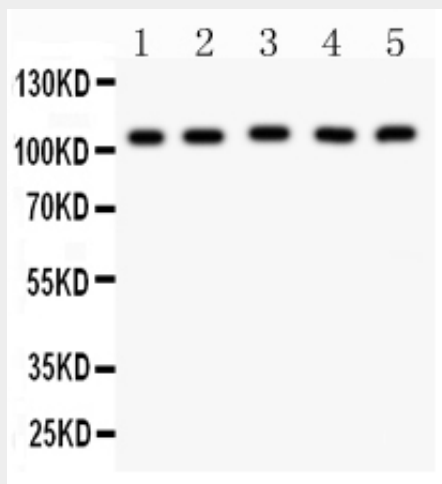
Anti-MSH2 Picoband Antibody - Protocols

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

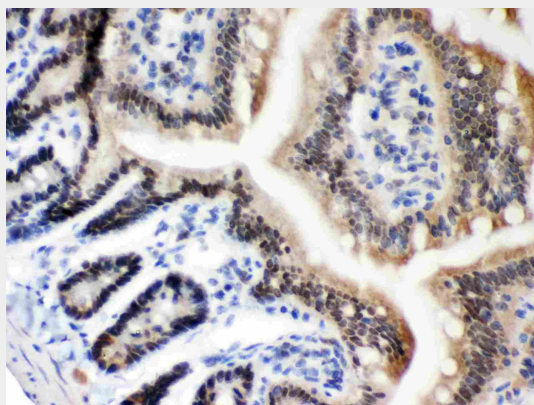
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

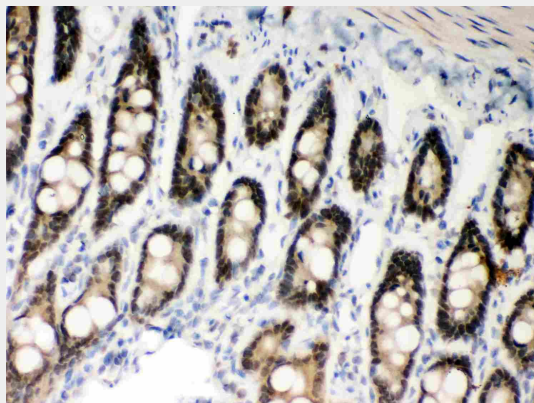
Anti-MSH2 Picoband Antibody - Images



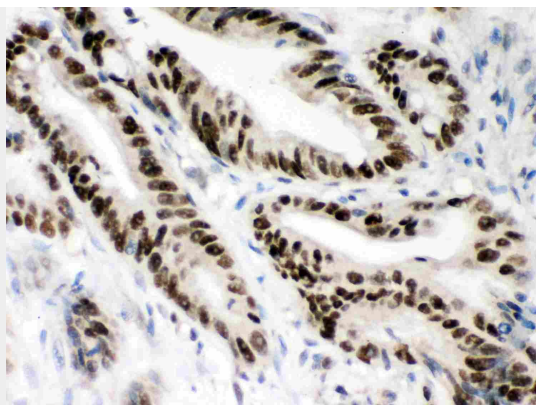
Anti- MSH2 Picoband antibody, ABO11975, Western blottingAll lanes: Anti MSH2 (ABO11975) at 0.5ug/ml
Lane 1: Mouse Testis Tissue Lysate at 50ug
Lane 2: Mouse Skeletal Muscle Tissue Lysate at 50ug
Lane 3: HELA Whole Cell Lysate at 40ug
Lane 4: A549 Whole Cell Lysate at 40ug
Lane 5: SMMC Whole Cell Lysate at 40ug
Predicted bind size: 105KD
Observed bind size: 105KD



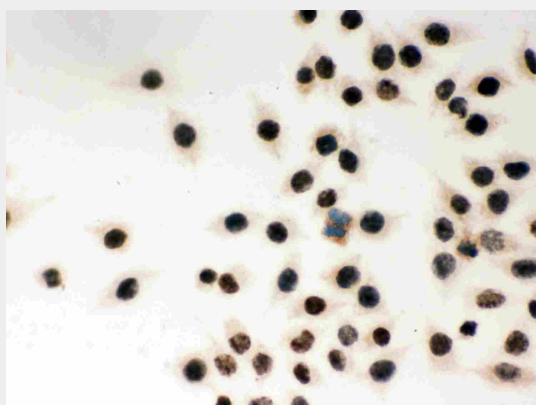
Anti- MSH2 Picoband antibody, ABO11975, IHC(P)IHC(P): Mouse Intestine Tissue



Anti- MSH2 Picoband antibody, ABO11975, IHC(P)IHC(P): Rat Intestine Tissue



Anti- MSH2 Picoband antibody, ABO11975, IHC(P)IHC(P): Human Intestinal Cancer Tissue



Anti- MSH2 Picoband antibody, ABO11975, ICCICC: SMMC Cell

Anti-MSH2 Picoband Antibody - Background

DNA mismatch repair protein Msh2, also known as MutS protein homolog 2 or MSH2, is a protein that in humans is encoded by the MSH2 gene, which is located on chromosome 2. MSH2 is a tumor suppressor gene and more specifically a caretaker gene that codes for a DNA mismatch repair (MMR) protein, MSH2 which forms a heterodimer with MSH6 to make the human MutS[±] mismatch repair complex. It also dimerizes with MSH3 to form the MutS[±] DNA repair complex. MSH2 is involved in many different forms of DNA repair, including transcription-coupled repair, homologous recombination, and base excision repair. It has been found that MSH2 may also be a coactivator of ESR1-dependent gene expression.