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Tel: 858.875.1900 Fax: 858.875.1999

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 r˚Constitution, 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.

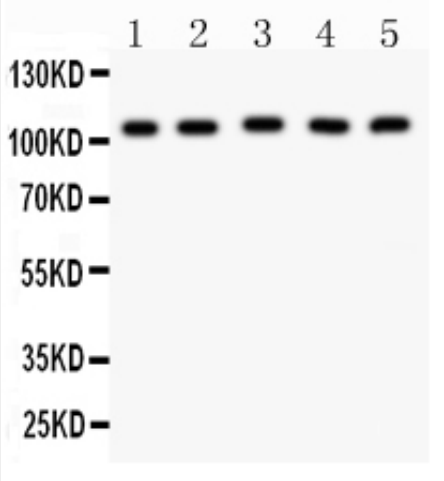
Anti-MSH2 Picoband Antibody - Protocols

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

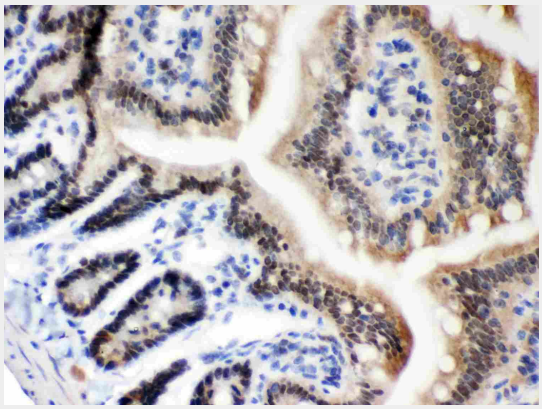
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

- Flow Cytomety
- Cell Culture

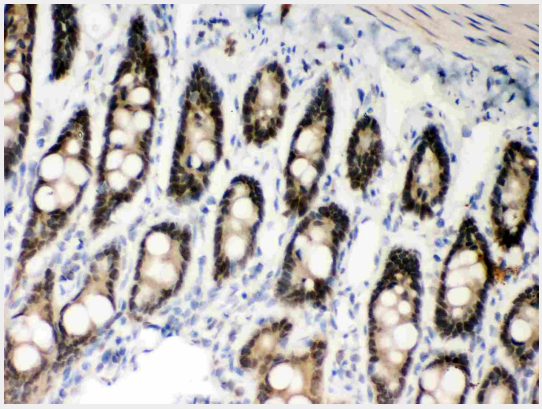
Anti-MSH2 Picoband Antibody - Images



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

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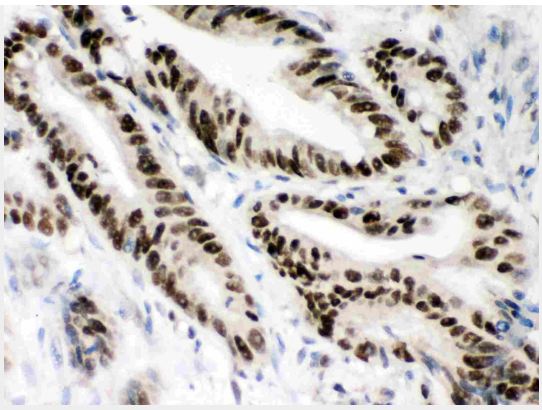
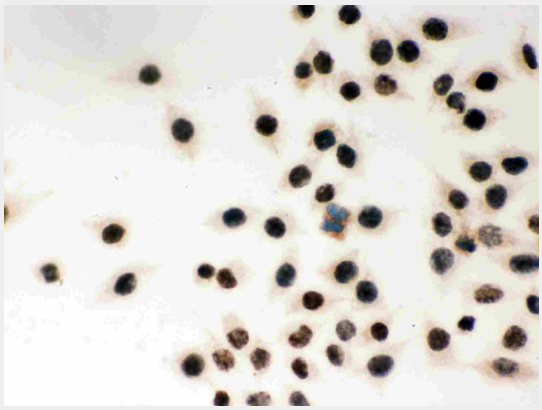


Anti- MSH2 Picoband antibody, ABO11975, IHC(P)IHC(P): Human Intestinal Cancer Tissue



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 aheterodimer with MSH6 to make the human MutSÎ± mismatch repair complex. It also dimerizes with MSH3 to form the MutSÎ² 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.