

## Anti-MSH2 Antibody Picoband® (monoclonal, 6B4F7)

Catalog Number: M00140-5

### About MSH2

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 $\alpha$  mismatch repair complex. It also dimerizes with MSH3 to form the MutS $\beta$  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.

### Overview

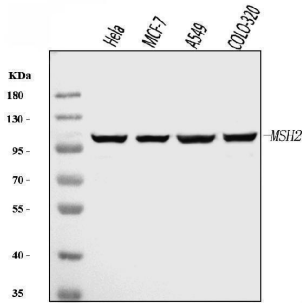
Product Name	Anti-MSH2 Antibody Picoband® (monoclonal, 6B4F7)
Reactive Species	Human
Description	Boster Bio Anti-MSH2 Antibody Picoband® (monoclonal, 6B4F7) catalog # M00140-5. Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IF, IHC, ICC, WB
Clonality	Monoclonal 6B4F7
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Mouse
Uniprot ID	P43246

### Technical Details

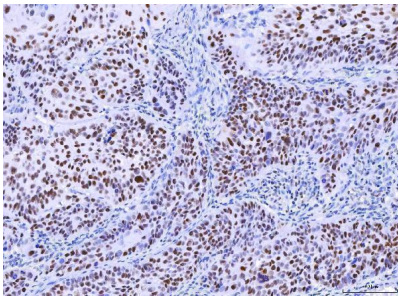
Immunogen	E.coli-derived human MSH2 recombinant protein (Position: Q337-N583). Human MSH2 shares 94% and 93% amino acid (aa) sequence identity with mouse and rat MSH2, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human

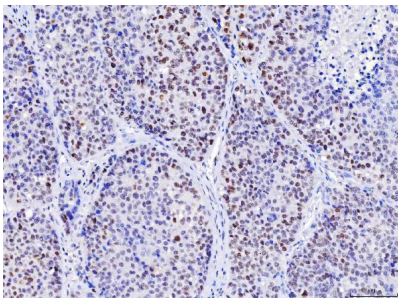
## Anti-MSH2 Antibody Picoband® (monoclonal, 6B4F7) (M00140-5) Images



Western blot analysis of MSH2 using anti-MSH2 antibody (M00140-5). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human A549 whole cell lysates, Lane 4: human COLO-320 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-MSH2 antigen affinity purified monoclonal antibody (Catalog # M00140-5) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for MSH2 at approximately 105 kDa. The expected band size for MSH2 is at 105 kDa.

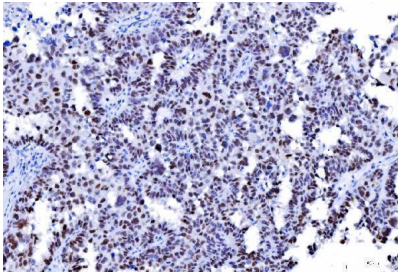


IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human laryngeal squamous cell carcinomas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

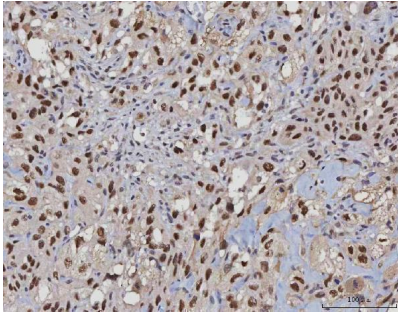


IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

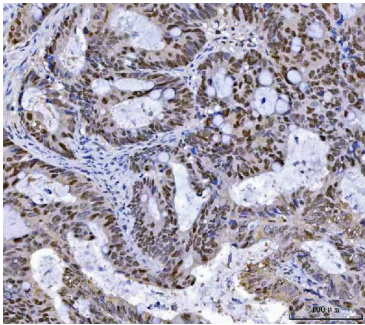
IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human serous adenocarcinoma of ovary tissue. Heat mediated antigen retrieval was performed in EDTA buffer



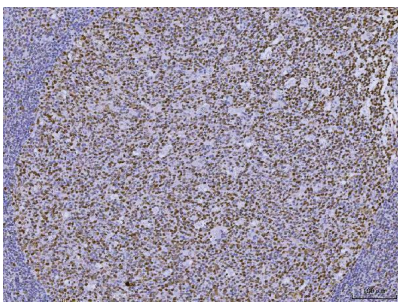
(pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.



IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human invasive urothelial carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.



IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.



IHC analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-MSH2 Antibody (M00140-5) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

IF analysis of MSH2 using anti-MSH2 antibody (M00140-5). MSH2 was detected in an immunocytochemical section of Caco-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL mouse anti-MSH2 Antibody



(M00140-5) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Mouse IgG (BA1141) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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Anti-MSH2 Antibody (monoclonal, 6B4F7)

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