BOSTER BIOLOGICAL TECHNOLOGY
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Anti-MSH2 Antibody Picoband®

Catalog Number: PB9284

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 aheterodimer with MSH6 to make the human MutSalpha mismatch repair complex. It also dimerizes with MSH3 to form the MutSbeta 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.

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Overview

Product Name	Anti-MSH2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MSH2 Antibody Picoband® catalog # PB9284. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P43246

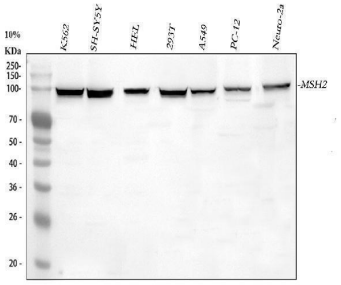
Technical Details

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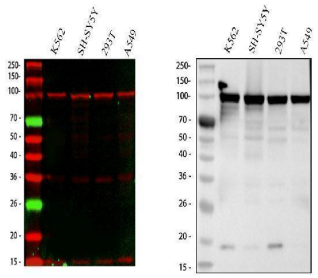
Immunogen	E.coli-derived human MSH2 recombinant protein (Position: Q337-N583). Human MSH2 shares 94% and 93% amino acid (aa) sequence identity with mouse and rat MSH2, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
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, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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Anti-MSH2 Antibody Picoband® (PB9284) Images



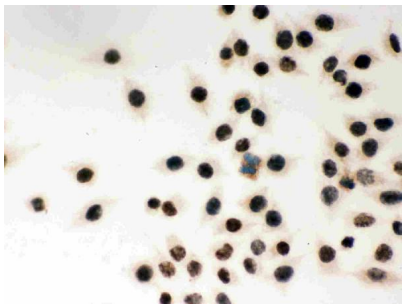
Western blot analysis of MSH2 using anti-MSH2 antibody (PB9284). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human K562 whole cell lysates, Lane 2: human SH-SY5Y whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: human A549 whole cell lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse Neuro-2a 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 rabbit anti-MSH2 antigen affinity purified polyclonal antibody (Catalog # PB9284) 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-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) 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.



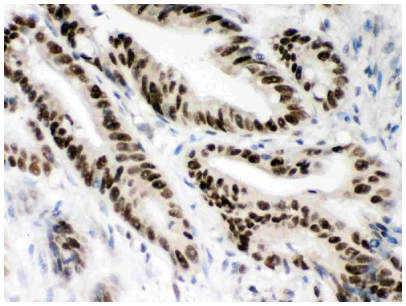
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IHC analysis of MSH2 using anti-MSH2 antibody (PB9284). MSH2 was detected in immunocytochemical section of SMMC Cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then

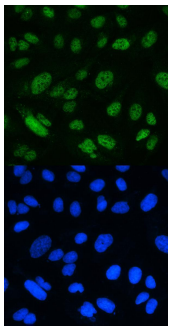
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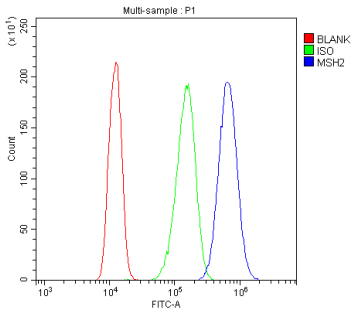
incubated with 1ug/ml rabbit anti-MSH2 Antibody (PB9284) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of MSH2 using anti-MSH2 antibody (PB9284). MSH2 was detected in paraffin-embedded section of Human Intestinal Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-MSH2 Antibody (PB9284) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IF analysis of MSH2 using anti-MSH2 antibody (PB9284). MSH2 was detected in immunocytochemical section of U20S cell. 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 2ug/mL rabbit anti-MSH2 Antibody (PB9284) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.



Flow Cytometry analysis of A431 cells using anti-MSH2 antibody (PB9284). Overlay histogram showing A431 cells stained with PB9284 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MSH2 Antibody (PB9284, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1 Publications Citing This Product

1. PubMed ID: 23485110, Zhang Yx, Yue Z, Wang Py, Li Yj, Xin Jx, Pang M, Zheng Qy, Xie Sy. Biomed Pharmacother. 2013 Mar;67(2):97-102. Doi: 10.1016/J.Biopha.2012.11.008. Epub 2012 Dec 28. Cisplatin Upregulates Msh2 Expression By Reducing Mir-21 To Inhibit A549 Cell Growth.

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Anti-MSH2 Antibody

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