

## Anti-SHP2/PTPN11 Antibody Picoband® (monoclonal, 2E6)

Catalog Number: M00150-2

### About PTPN11

PTPN11 (Tyrosine-protein phosphatase non-receptor type 11), also known as protein-tyrosine phosphatase 1D (PTP-1D), protein-tyrosine phosphatase 2C (PTP-2C), TYROSINE PHOSPHATASE SHP2 (SHP2), BPTP3, SH-PTP2, SHP-2, SH-PTP3, is an enzyme that in humans is encoded by the PTPN11 gene. PTPN11 is a member of the protein tyrosine phosphatase (PTP) family. The open reading frame consists of 1,779 nucleotides potentially encoding a protein of 593 amino acids with a predicted molecular mass of 68 kD. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains two tandem Src homology-2 domains, which function as phospho-tyrosine binding domains and mediate the interaction of this PTP with its substrates. This PTP is widely expressed in most tissues and plays a regulatory role in various cell signaling events that are important for a diversity of cell functions, such as mitogenic activation, metabolic control, transcription regulation, and cell migration. Mutations in this gene are a cause of Noonan syndrome as well as acute myeloid leukemia.

### Overview

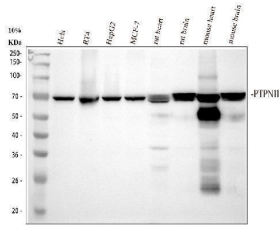
Product Name	Anti-SHP2/PTPN11 Antibody Picoband® (monoclonal, 2E6)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SHP2/PTPN11 Antibody Picoband® (monoclonal, 2E6) catalog # M00150-2. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	Monoclonal Clone: 2E6
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
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	Mouse
Uniprot ID	Q06124

### Technical Details

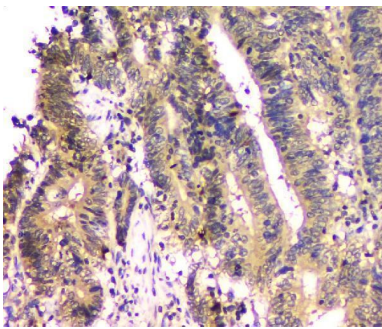
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human SHP2, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super 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, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells

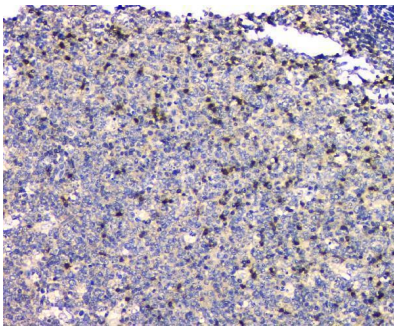
## Anti-SHP2/PTPN11 Antibody Picoband® (monoclonal, 2E6) (M00150-2) Images



Western blot analysis of SHP2/PTPN11 using anti-SHP2/PTPN11 antibody (M00150-2). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 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 RT4 whole cell lysates, Lane 3: human HepG2 whole cell lysates. Lane 4: human MCF-7 whole cell lysates, Lane 5: rat heart tissue lysates, Lane 6: rat brain tissue lysates, Lane 7: mouse heart tissue lysates, Lane 8: mouse brain tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-SHP2/PTPN11 antigen affinity purified monoclonal antibody (Catalog # M00150-2) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for SHP2/PTPN11 at approximately 68 kDa. The expected band size for SHP2/PTPN11 is at 68 kDa.

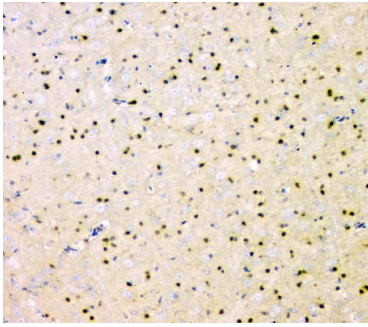


IHC analysis of SHP2/PTPN11 using anti-SHP2/PTPN11 antibody (M00150-2). SHP2/PTPN11 was detected in paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SHP2/PTPN11 Antibody (M00150-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

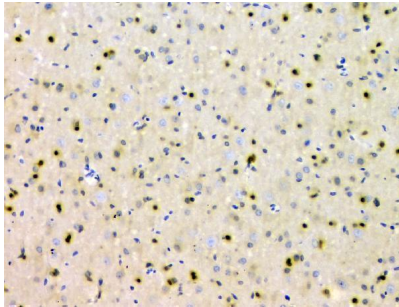


IHC analysis of SHP2/PTPN11 using anti-SHP2/PTPN11 antibody (M00150-2). SHP2/PTPN11 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SHP2/PTPN11 Antibody (M00150-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

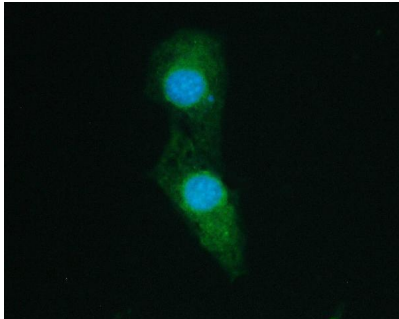
IHC analysis of SHP2/PTPN11 using anti-SHP2/PTPN11



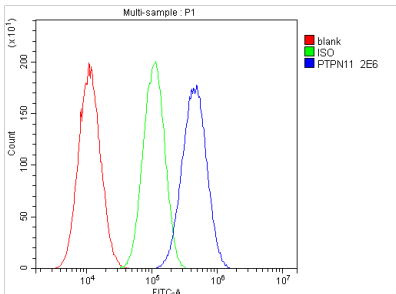
antibody (M00150-2). SHP2/PTPN11 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SHP2/PTPN11 Antibody (M00150-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of SHP2/PTPN11 using anti SHP2/PTPN11 antibody (M00150-2). SHP2/PTPN11 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-SHP2/PTPN11 Antibody (M00150-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IF analysis of SHP2/PTPN11 using anti-SHP2/PTPN11 antibody (M00150-2). SHP2/PTPN11 was detected in immunocytochemical section of U251 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 2ug/mL mouse anti-SHP2/PTPN11 Antibody (M00150-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) 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 A549 cells using anti-SHP2/PTPN11 antibody (M00150-2). Overlay histogram showing A549 cells stained with M00150-2 (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 mouse anti-SHP2/PTPN11 Antibody (M00150-2, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-SHP2/PTPN11 Antibody (monoclonal, 2E6)

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