

**Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10)**  
Catalog # ABO16235

**Specification**

**Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - Product Information**

Application	WB, IHC, IF, ICC, FC
Primary Accession	<a href="#">P29350</a>
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized

**Description**

Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

**Reconstitution**

Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

**Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - Additional Information**

**Gene ID** 5777

**Other Names**

Tyrosine-protein phosphatase non-receptor type 6, 3.1.3.48, Hematopoietic cell protein-tyrosine phosphatase, Protein-tyrosine phosphatase 1C, PTP-1C, Protein-tyrosine phosphatase SHP-1, SH-PTP1, PTPN6, HCP, PTP1C

**Calculated MW**

68 kDa KDa

**Application Details**

Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat  
Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human  
Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human  
Flow Cytometry, 1-3 µg/1x10<sup>6</sup> cells, Human

**Contents**

Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na<sub>2</sub>HPO<sub>4</sub>.

**Immunogen**

E.coli-derived human SHP1/PTPN6 recombinant protein (Position: E67-K572).

**Purification**

Immunogen affinity purified.

**Storage**

**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.

### Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - Protein Information

**Name** PTPN6

**Synonyms** HCP, PTP1C

#### Function

Modulates signaling by tyrosine phosphorylated cell surface receptors such as KIT and the EGF receptor/EGFR. The SH2 regions may interact with other cellular components to modulate its own phosphatase activity against interacting substrates. Together with MTUS1, induces UBE2V2 expression upon angiotensin II stimulation. Plays a key role in hematopoiesis.

#### Cellular Location

Cytoplasm. Nucleus. Note=In neurons, translocates into the nucleus after treatment with angiotensin II (By similarity) Shuttles between the cytoplasm and nucleus via its association with PDPK1.

#### Tissue Location

Isoform 1 is expressed in hematopoietic cells. Isoform 2 is expressed in non-hematopoietic cells

### Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - 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-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - Images

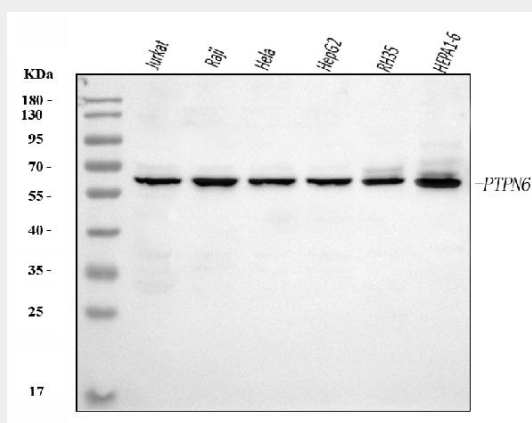


Figure 1. Western blot analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving

gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Jurkat whole cell lysates,  
Lane 2: human Raji whole cell lysates,  
Lane 3: human Hela whole cell lysates,  
Lane 4: human HepG2 whole cell lysates,  
Lane 5: rat RH35 whole cell lysates,  
Lane 6: mouse HEPA1-6 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-SHP1/PTPN6 antigen affinity purified monoclonal antibody (Catalog # M00938-2) at 0.5  $\mu\text{g}/\text{mL}$  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 SHP1/PTPN6 at approximately 68 kDa. The expected band size for SHP1/PTPN6 is at 68 kDa.

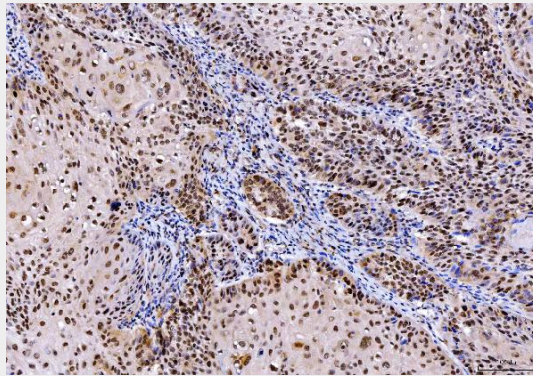


Figure 2. IHC analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). SHP1/PTPN6 was detected in a paraffin-embedded section of human laryngeal squamous cell carcinomas tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu\text{g}/\text{ml}$  mouse anti-SHP1/PTPN6 Antibody (M00938-2) 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.

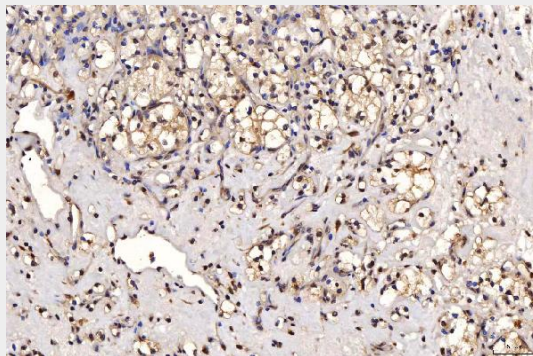


Figure 3. IHC analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). SHP1/PTPN6 was detected in a paraffin-embedded section of human renal clear cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2  $\mu\text{g}/\text{ml}$  mouse anti-SHP1/PTPN6 Antibody (M00938-2) 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.

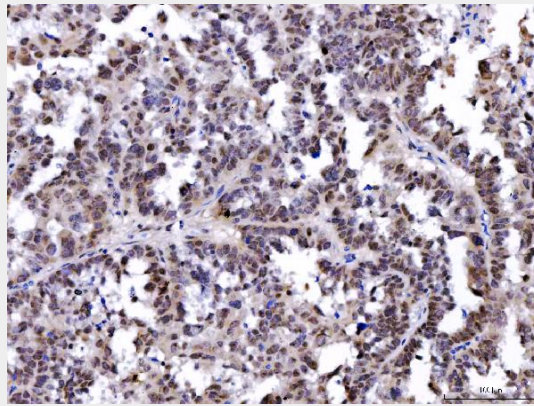


Figure 4. IHC analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). SHP1/PTPN6 was detected in a paraffin-embedded section of human serous adenocarcinoma of ovary tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-SHP1/PTPN6 Antibody (M00938-2) 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.

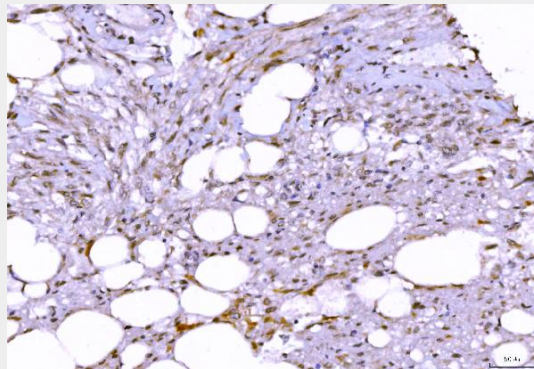


Figure 5. IHC analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). SHP1/PTPN6 was detected in a paraffin-embedded section of human SM fatty carcinoma of the left kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-SHP1/PTPN6 Antibody (M00938-2) 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.

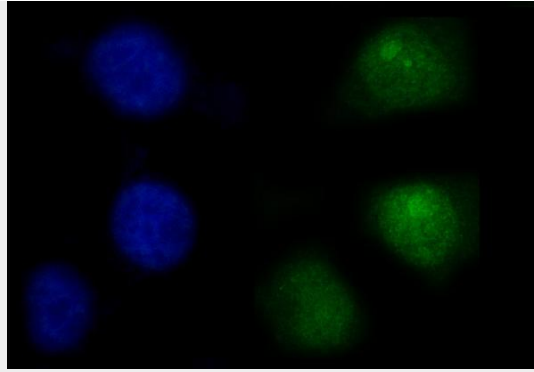


Figure 5. IF analysis of SHP1/PTPN6 using anti-SHP1/PTPN6 antibody (M00938-2). SHP1/PTPN6 was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5  $\mu\text{g}/\text{mL}$  mouse anti-SHP1/PTPN6 Antibody (M00938-2) 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.

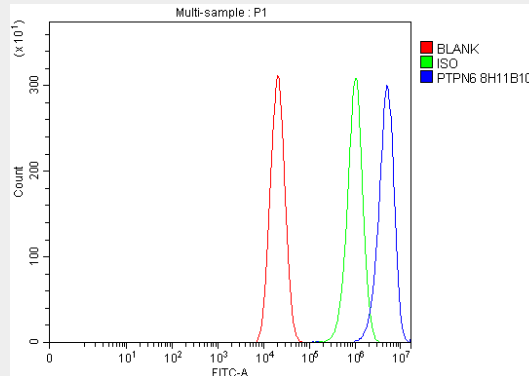


Figure 7. Flow Cytometry analysis of Caco-2 cells using anti-SHP1/PTPN6 antibody (M00938-2). Overlay histogram showing Caco-2 cells stained with M00938-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-SHP1/PTPN6 Antibody (M00938-2, 1  $\mu\text{g}/1 \times 10^6$  cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10  $\mu\text{g}/1 \times 10^6$  cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1  $\mu\text{g}/1 \times 10^6$ ) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

### Anti-SHP1/PTPN6 Antibody Picoband™ (monoclonal, 8H11B10) - Background

Tyrosine-protein phosphatase non-receptor type 6, also known as Src homology region 2 domain-containing phosphatase-1 (SHP-1), is an enzyme that in humans is encoded by the PTPN6 gene. The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. N-terminal part of this PTP contains two tandem Src homolog (SH2) domains, which act as protein phospho-tyrosine binding domains, and mediate the interaction of this PTP with its substrates. This PTP is expressed primarily in hematopoietic cells, and functions as an important regulator of multiple signaling pathways in hematopoietic cells. This PTP has been shown to interact with, and dephosphorylate a wide spectrum of phospho-proteins involved in hematopoietic cell signaling. Multiple alternatively spliced variants of this gene, which encode distinct isoforms, have been reported.