**Product datasheet**

**Anti-SHP2 antibody [EPR17829-9] ab187040**

**Overview**

- **Product name**: Anti-SHP2 antibody [EPR17829-9]
- **Description**: Rabbit monoclonal [EPR17829-9] to SHP2
- **Host species**: Rabbit
- **Tested applications**: Suitable for: IP, WB
- **Species reactivity**: Reacts with: Mouse, Rat, Human
- **Immunogen**: Recombinant fragment within Mouse SHP2 aa 200-550. The exact sequence is proprietary. Database link: [P35235](https://www.uniprot.org/uniprot/P35235)
- **Positive control**: WB: HeLa, Jurkat, HEK-293 and NIH/3T whole cell lysates; mouse brain and heart lysates; rat brain lysate. IP: HeLa and NIH/3T3 whole cell lysates.
- **General notes**: Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents. This product is a recombinant rabbit monoclonal antibody.

**Properties**

- **Form**: Liquid
- **Storage instructions**: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
- **Storage buffer**: Preservative: 0.01% Sodium azide
  Constituents: PBS, 40% Glycerol, 0.05% BSA
- **Purity**: Protein A purified
- **Clonality**: Monoclonal
- **Clone number**: EPR17829-9
- **Isotype**: IgG

**Applications**

Our Abpromise guarantee covers the use of **ab187040** in the following tested applications.
Function
Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus.

Tissue specificity
Widely expressed, with highest levels in heart, brain, and skeletal muscle.

Involvement in disease
Defects in PTPN11 are the cause of LEOPARD syndrome type 1 (LEOPARD1) [MIM:151100]. It is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and deafness. Defects in PTPN11 are the cause of Noonan syndrome type 1 (NS1) [MIM:163950]. Noonan syndrome (NS) is a disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. Some patients with Noonan syndrome type 1 develop multiple giant cell lesions of the jaw or other bony or soft tissues, which are classified as pigmented villonodular synovitis (PVNS) when occurring in the jaw or joints. Note=Mutations in PTPN11 account for more than 50% of the cases. Rarely, NS is associated with juvenile myelomonocytic leukemia (JMML). NS1 inheritance is autosomal dominant.
Defects in PTPN11 are a cause of juvenile myelomonocytic leukemia (JMML) [MIM:607785]. JMML is a pediatric myelodysplastic syndrome that constitutes approximately 30% of childhood cases of myelodysplastic syndrome (MDS) and 2% of leukemia. It is characterized by leukocytosis with tissue infiltration and in vitro hypersensitivity of myeloid progenitors to granulocyte-macrophage colony stimulating factor.
Defects in PTPN11 are a cause of metachondromatosis (MC) [MIM:156250]. It is a skeletal disorder with radiologic features of both multiple exostoses and Ollier disease, characterized by the presence of multiple enchondromas and osteochondroma-like lesions.

Sequence similarities
Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily.
Contains 2 SH2 domains.
Contains 1 tyrosine-protein phosphatase domain.

Domain
The SH2 domains repress phosphatase activity. Binding of these domains to phosphotyrosine-containing proteins relieves this auto-inhibition, possibly by inducing a conformational change in the enzyme.

Post-translational modifications
Phosphorylated on Tyr-546 and Tyr-584 upon receptor protein tyrosine kinase activation; which creates a binding site for GRB2 and other SH2-containing proteins.

Cellular localization
Cytoplasm.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<th>Abreviews</th>
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<td>IP</td>
<td>1/40.</td>
<td></td>
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<tr>
<td>WB</td>
<td>1/5000.</td>
<td>Predicted molecular weight: 68 kDa.</td>
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All lanes: Anti-SHP2 antibody [EPR17829-9] (ab187040) at 1/5000 dilution

Lane 1: HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 2: Jurkat (human T cell leukemia cell line from peripheral blood) whole cell lysate
Lane 3: HEK-293 (human epithelial cell line from embryonic kidney) whole cell lysate
Lane 4: NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate
Lane 5: Mouse brain tissue lysate
Lane 6: Mouse heart tissue lysate
Lane 7: Rat brain tissue lysate
Lane 8: Rat heart tissue lysate

Lysates/proteins at 5 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 68 kDa
Observed band size: 68 kDa

Exposure time: 1 minute

Blocking and dilution buffer: 5% NFDM/TBST.
SHP2 was immunoprecipitated from 1 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab187040 at 1/40 dilution. Western blot was performed from the immunoprecipitate using ab187040 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/10000 dilution.

Lane 1: HeLa whole cell lysate 10 μg (Input).
Lane 2: ab187040 IP in HeLa whole cell lysate (+).
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab187040 in HeLa whole cell lysate (-).

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 minutes.

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