

## SH-PTP2 (Phospho Tyr580) Rabbit pAb

CatalogNo: YP0582 **Orthogonal Validated** 

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat

#### Applications

- WB, IHC, IF, ELISA

#### MW

- 70kD (Observed)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

**WB 1:500-1:2000**

**IHC 1:100-1:300**

**ELISA 1:40000**

**IF 1:50-200**

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human SHP-2 around the phosphorylation site of Tyr580. AA range:546-595

**Specificity**

Phospho-SH-PTP2 (Y580) Polyclonal Antibody detects endogenous levels of SH-PTP2 protein only when phosphorylated at Y580. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):RVyEN

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## | Target Information

**Gene name** PTPN11

**Protein Name** Tyrosine-protein phosphatase non-receptor type 11

Organism	Gene ID	UniProt ID
Human	<a href="#">5781</a> ;	<a href="#">Q06124</a> ;
Mouse	<a href="#">19247</a> ;	<a href="#">P35235</a> ;
Rat	<a href="#">25622</a> ;	<a href="#">P41499</a> ;

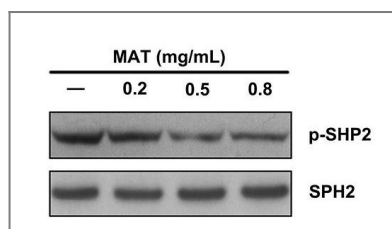
**Cellular Localization** Cytoplasm . Nucleus .

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

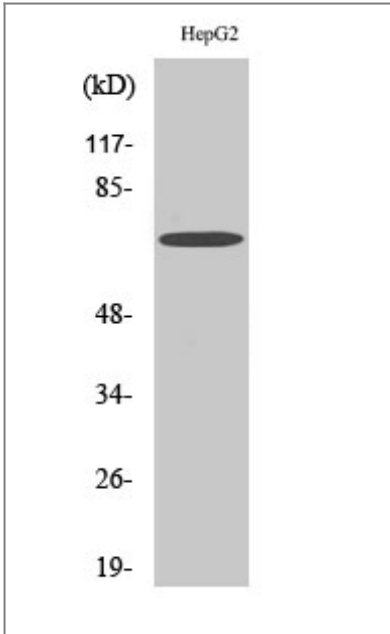
## Function

Catalytic activity:Protein tyrosine phosphate + H (2) O = protein tyrosine + phosphate.  
,Disease: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.  
,Disease:Defects in PTPN11 are a cause of Noonan-like syndrome [MIM:163955]; also known as Noonan-like/multiple giant cell lesion syndrome. It is an autosomal dominant disorder characterized by Noonan features associates with giant cell lesions of bone and soft tissue.  
,Disease:Defects in PTPN11 are the cause of LEOPARD syndrome [MIM:151100]. It is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentiginos , electrocardiographic conduction abnormalities , ocular hypertelorism , pulmonic stenosis , abnormalities of genitalia , retardation of growth , and deafness.  
,Disease:Defects in PTPN11 are the cause of Noonan syndrome 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. It is a genetically heterogeneous and relatively common syndrome , with an estimated incidence of 1 in 1000-2500 live births. 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.  
,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.  
,Function:Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus.  
,PTM: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.  
,similarity:Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily.  
,similarity:Contains 1 tyrosine-protein phosphatase domain.  
,similarity:Contains 2 SH2 domains.  
,subunit:Interacts with phosphorylated LIME1 and BCAR3. Interacts with SHB and INPP5D/SHIP1 (By similarity) . Interacts with PTPNS1 and CD84. Interacts with phosphorylated SIT1 and MPZL1. Interacts with FCRL3 , FCRL4 , FCRL6 and ANKHD1.  
,tissue specificity:Widely expressed , with highest levels in heart , brain , and skeletal muscle. ,

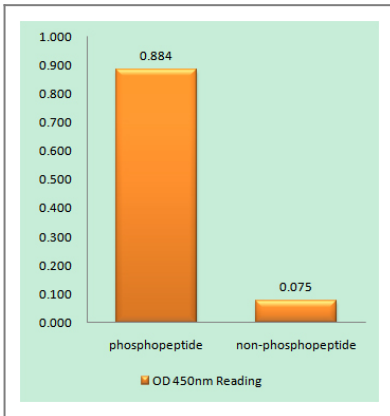
## Validation Data



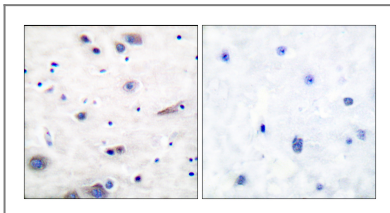
Ma, Lingdi, et al. "Matrine inhibits BCR/ABL mediated ERK/MAPK pathway in human leukemia cells." *Oncotarget*8.65 (2017): 108880.



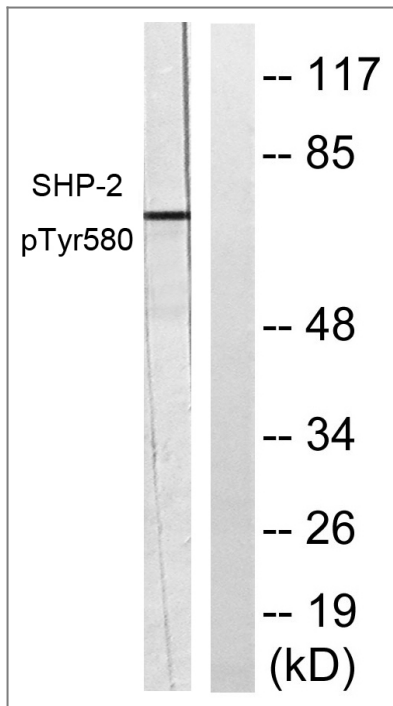
Western Blot analysis of various cells using Phospho-SH-PTP2 (Y580) Polyclonal Antibody



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using SHP-2 (Phospho-Tyr580) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using SHP-2 (Phospho-Tyr580) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from A431 cells, using SHP-2 (Phospho-Tyr580) Antibody. The lane on the right is blocked with the phospho peptide.

## Contact information

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Please scan the QR code to access additional product information:  
**SH-PTP2 (Phospho Tyr580) Rabbit pAb**

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