



# SH-PTP2 Rabbit mAb

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| <b>Catalog No</b>                  | YP-rAb-17725                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Reactivity</b>                  | Human,Mouse,Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Applications</b>                | WB,IHC,IF,IP,ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Gene Name</b>                   | PTPN11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Protein Name</b>                | Tyrosine-protein phosphatase non-receptor type 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Purification Process</b>        | Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Specificity</b>                 | Endogenous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Formulation</b>                 | PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>                      | Monoclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Dilution</b>                    | IHC 1:2000-1:8000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Concentration</b>               | 0.5 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage Stability</b>           | -15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>                    | SH-PTP2;Tyrosine-protein phosphatase non-receptor type 11;PTPN11 ; PTP2C ; SHPTP2 ; Tyrosine-protein phosphatase non-receptor type 11 ; Protein-tyrosine phosphatase 1D ; PTP-1D ; Protein-tyrosine phosphatase 2C ; PTP-2C ; SH-PTP2 ; SHP-2 ; Shp2 ; SH-PTP3;PTPN11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Observed Band</b>               | 68kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Calculated Molecular Weight</b> | 68kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Cell Pathway</b>                | Cytoplasm, Nucleus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Tissue Specificity</b>          | Widely expressed, with highest levels in heart, brain, and skeletal muscle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Function</b>                    | 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 lentigines, 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.

## Background

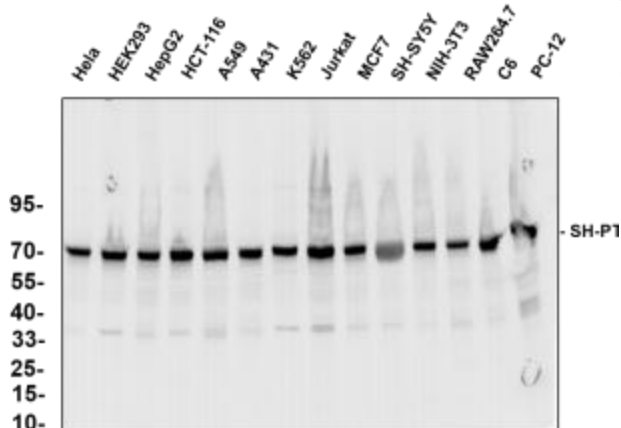
The protein encoded by this gene is a member of the protein tyrosine phosphatase family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains two tandem Src homology-2 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. [provided by RefSeq, Aug 2016]

## matters needing attention

Avoid repeated freezing and thawing!

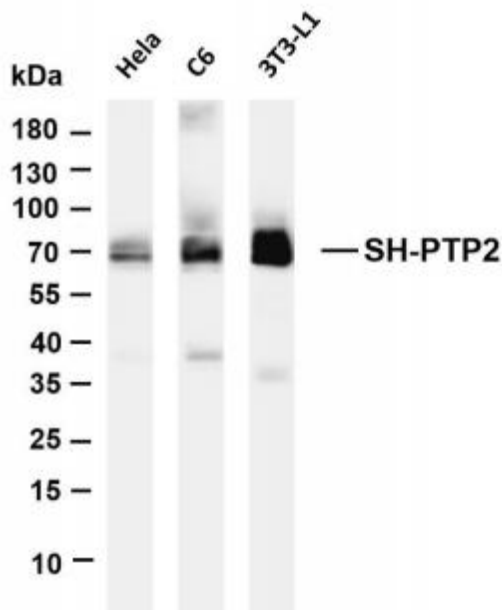
## Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

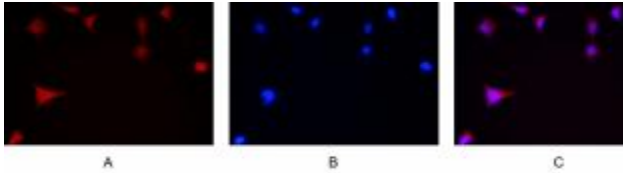


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4~C, over night with a 1:5000 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-SH-PTP2 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: C6 Lane 3: 3T3-L1  
Predicted band size: 68kDa Observed band size: 68kDa



Immunofluorescence analysis of HEK293. Picture A: SHP2 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

