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| Product name: | SH-PTP2 (phospho Tyr542) Rabbit Polyclonal Antibody |
| Cat number: | ABN05427 |
| Conjugate: | Unconjugated |
| Size: | 100µL |
| Clone: | Polyclonal |
| Concentration: | 1mg/ml |
| Host: | Rabbit |
| Isotype: | IgG |
| Immunogen: | The antiserum was produced against synthesized peptide derived from human SHP-2 around the phosphorylation site of Tyr542. AA range:508-557 |
| Reactivity: | Human,Mouse,Rat |
| Applications: | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000 |
| Molecular Weight: | 70kDa |
| Purification: | Affinity purification |
| Form: | Liquid |
| Buffer: | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| Storage: | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

Background:

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. 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],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.,