

SH-PTP2 (Phospho Tyr542) Rabbit pAb

CatalogNo: YP0581

Orthogonal Validated 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, IP, ELISA

MW

- 70kD (Observed)

Isotype

- IgG

Recommended Dilution Ratios

WB 1:500-1:2000**IHC 1:100-1:300****ELISA 1:40000****IF 1:50-200****IP 1:50-1:200**

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.

Basic Information

Clonality

Polyclonal

Immunogen Information

Immunogen

The antiserum was produced against synthesized peptide derived from human SHP-2 around the phosphorylation site of Tyr542. AA range: 508-557

Specificity Phospho-SH-PTP2 (Y542) Polyclonal Antibody detects endogenous levels of SH-PTP2 protein only when phosphorylated at Y542. 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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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):HEyTN

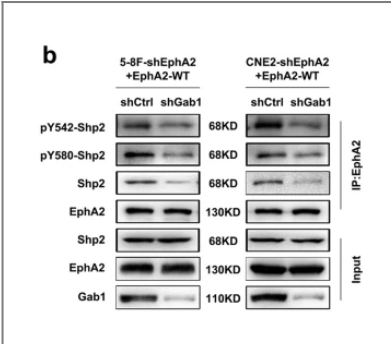
| Target Information

Gene name	PTPN11		
Protein Name	Tyrosine-protein phosphatase non-receptor type 11		
	Organism	Gene ID	UniProt ID
	Human	5781 ;	Q06124 ;
	Mouse	19247 ;	P35235 ;
	Rat	25622 ;	P41499 ;
Cellular Localization	Cytoplasm . Nucleus .		
Tissue specificity	Widely expressed, with highest levels in heart, brain, and skeletal muscle.		

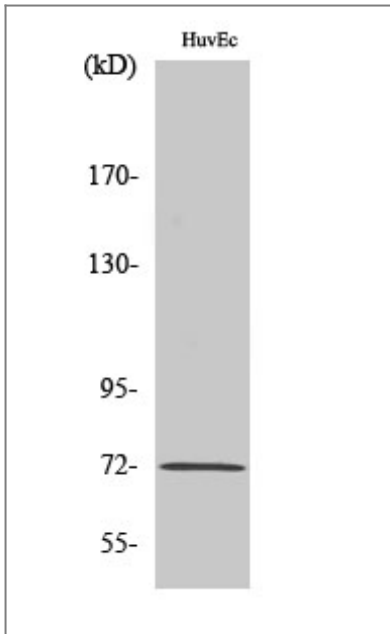
Function

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 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 ANKHHD1.,tissue specificity:Widely expressed, with highest levels in heart, brain, and skeletal muscle.,

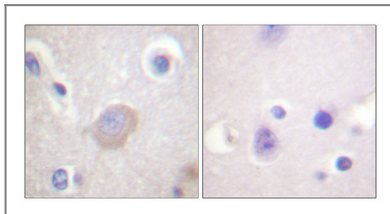
Validation Data



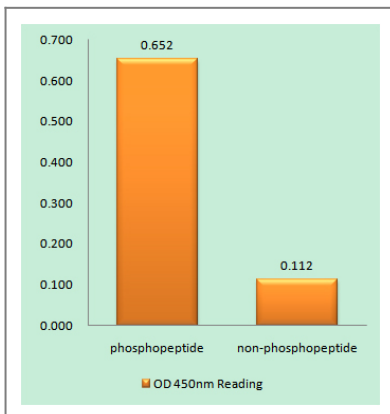
Xiang, YP., Xiao, T., Li, QG. et al. Y772 phosphorylation of EphA2 is responsible for EphA2-dependent NPC nasopharyngeal carcinoma growth by Shp2/Erk-1/2 signaling pathway. Cell Death Dis 11, 709 (2020).



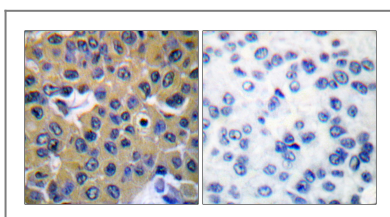
Western Blot analysis of various cells using Phospho-SH-PTP2 (Y542) Polyclonal Antibody diluted at 1:1000



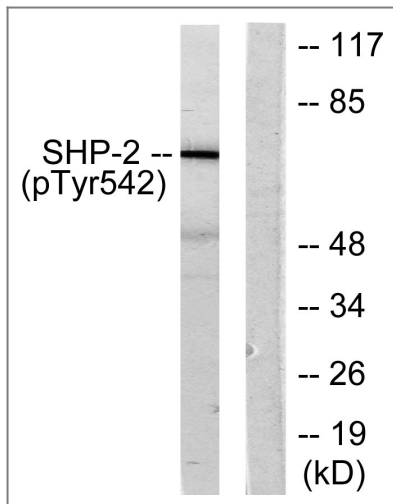
Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.



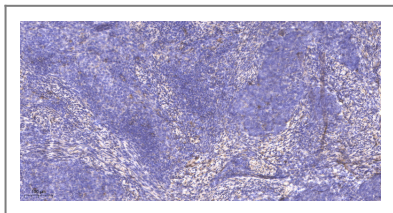
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using SHP-2 (Phospho-Tyr542) Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using SHP-2 (Phospho-Tyr542) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from A431 cells, using SHP-2 (Phospho-Tyr542) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded human cervical carcinoma. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).

Contact information

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Please scan the QR code to access additional product information:
SH-PTP2 (Phospho Tyr542) Rabbit pAb

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