SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-PTPN11 antibody

SL25352R

Product Name	PTPN11
Chinese Name	酪氨酸蛋白磷酸酶非受体型 11 抗体
Alias	PTN11_HUMAN; Tyrosine-protein phosphatase non-receptor type 11; PTP2C; SHPTP2; EC:3.1.3.48; Protein-tyrosine phosphatase 1D (PTP-1D); Protein-tyrosine phosphatase 2C (PTP-2C); SH-PTP2 (SHP-2; Shp2); SH-PTP3; protein tyrosine phosphatase non-receptor type 11; CFC; NS1; JMML; BPTP3; PTP2C; METCDS;
Research Area	Tumour Cell biology Signal transduction Apoptosis transcriptional regulatory factor Kinases and Phosphatases Cell differentiation
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse(predicted:Rat,Chicken,Pig,Cow,Horse,Sheep)
Applications	IHC-P=1:100-500,IHC-F=1:400-800,IF=1:100-500,Flow-Cyt=1ug/Test（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	68kDa
Cellular localization	cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human PTPN11: 271-370/593
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

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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. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2012]

Product Detail

Function:
Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus. Dephosphorylates ROCK2 at Tyr-722 resulting in stimulatation of its RhoA binding activity.

Subunit:
Interacts with phosphorylated LIME1 and BCAR3. Interacts with SHB and INPP5D/SHIP1. Interacts with MILR1 (tyrosine-phosphorylated). Interacts with FLT1 (tyrosine-phosphorylated), FLT3 (tyrosine-phosphorylated), FLT4 (tyrosine-phosphorylated), KIT and GRB2. Interacts with PDGFRA (tyrosine phosphorylated). Interacts (via SH2 domain) with TEK/TIE2 (tyrosine phosphorylated) (By similarity). Interacts with PTPNS1 and CD84. Interacts with phosphorylated SIT1 and MPZL1. Interacts with FCRL3, FCRL4, FCRL6 and ANKHD1. Interacts with KIR2DL1; the interaction is enhanced by ARRB2. Interacts with GAB2. Interacts with TERT; the interaction retains TERT in the nucleus. Interacts with PECAM1 and FER. Interacts with EPHA2 (activated); participates in PTK2/FAK1 dephosphorylation in EPHA2 downstream signaling. Interacts with ROS1; mediates PTPN11 phosphorylation. Interacts with PDGFRB (tyrosine phosphorylated); this interaction increases the PTPN11 phosphatase activity.

Subcellular Location:
Cytoplasm.

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

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. Phosphorylated upon activation of the receptor-type kinase FLT3. Phosphorylated upon activation of the receptor-type kinase PDGFRA (By similarity). Phosphorylated by activated PDGFRB.

DISEASE:
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. Phosphorylated upon activation of the receptor-type kinase FLT3. Phosphorylated upon activation of the receptor-type kinase PDGFRA (By similarity). Phosphorylated by activated PDGFRB.

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

SWISS:
Q06124

Gene ID:
5781

Database links:

Entrez Gene: 5781 Human

Entrez Gene: 19247 Mouse

Entrez Gene: 25622 Rat

Omim: 176876 Human

SwissProt: Q06124 Human

SwissProt: P35235 Mouse

SwissProt: P41499 Rat

Unigene: 506852 Human

Unigene: 474046 Mouse

Unigene: 8681 Mouse

Unigene: 98209 Rat

Kinases and Phosphatases（Kinases and Phosphatases）

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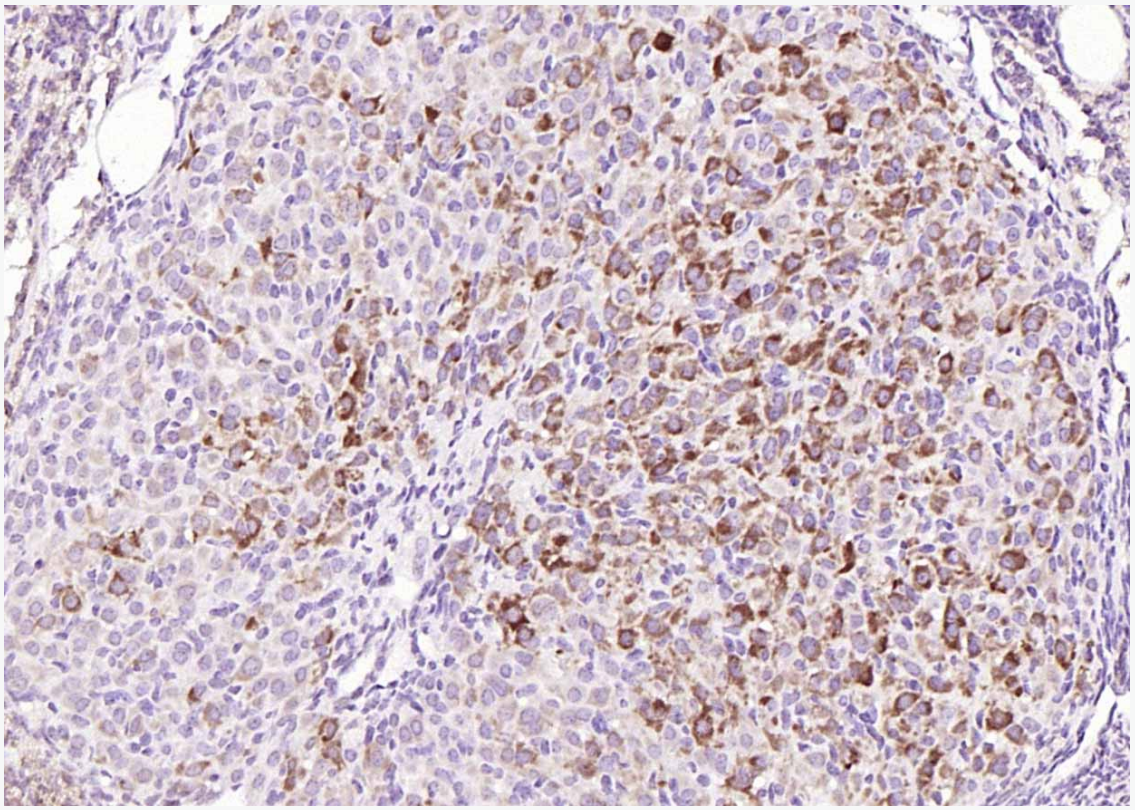
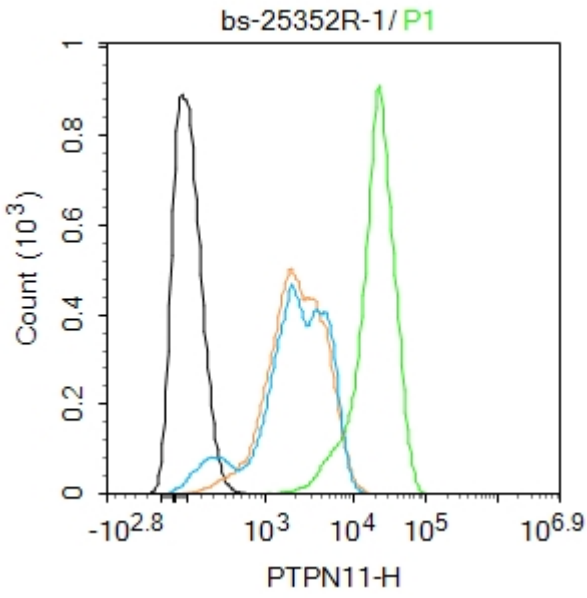
SHP2(SH-PTP2)参与多种细胞内信号传导 如 MAP kinase、 PI3k 等途径，SHP2 也是许多其他原癌基因信号通路的重要组成部分，在细胞的增殖及分化等过程扮演重要的角色.

Product Picture



Paraformaldehyde-fixed, paraffin embedded (mouse ovary); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PTPN11) Polyclonal Antibody, Unconjugated (SL25352R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Blank control（black line）:HepG2.

Primary Antibody (green line): Rabbit Anti-PTPN11 antibody (SL25352R)

Dilution:1ug/Test;

Secondary Antibody（white blue line）: Goat anti-rabbit IgG-AF488

Dilution: 0.5ug/Test.

Isotype control（orange line）: Normal Rabbit IgG

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20℃, The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events

was performed.