



Rabbit Anti-Phospho-SHP2 (Tyr81) antibody

SL5638R

Product Name:	Phospho-SHP2 (Tyr81)
Chinese Name:	磷酸化蛋白酪氨酸磷酸酶2抗体
Alias:	SYP(phospho Y81); SHIP2; BTP3; BTP3; CFC; MGC14433; Noonan syndrome 1; Noonan syndrome 1 protein tyrosine phosphatase 2C; NS 1; NS1; Protein tyrosine phosphatase 2C; Protein Tyrosine Phosphatase Non receptor Type 11; PTP 1D; PTP 2C; PTP1D; PTP2C; PTPN 11; PTPN11; SAP2; SH PTP2; SH PTP3; SH2 domain containing protein tyrosine phosphatase 2; SHIP2; SHP 2; SHP-2; SHPTP 2; SHPTP2; SHPTP3; SIT protein precursor; Syp; Tyrosine protein phosphatase non receptor type 11; Src homology 2 (SH2) domain containing phosphotyrosinephosphatase 2.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	68kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human SHP2 around the phosphorylation site of 81:QY(p-Y)ME
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:

[PubMed](#)

The steady state of protein tyrosyl phosphorylation in cells is regulated by the opposing action of tyrosine kinases and protein tyrosine phosphatases (PTPs). Several groups have independently identified a non transmembrane PTP, designated SHPTP1 (also known as PTP1C, HCP and SHP), which is primarily expressed in hematopoietic cells and characterized by the presence of two SH2 domains N terminal to the PTP domain. A second and much more widely expressed PTP with SH2 domains, SHPTP2 (also designated PTP1D and Syp), has been identified. SHP2 is a protein tyrosine phosphatase that is widely expressed and plays a regulatory role in various cell signaling events that are important for many cell functions, such as mitogenic activation, metabolic control, transcription regulation, and cell migration.

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 stimulation 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.

Product Detail:

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

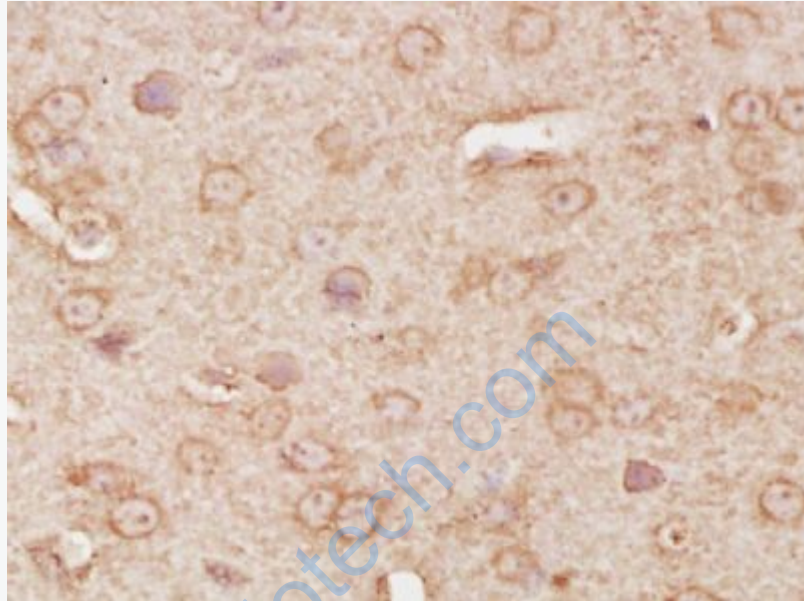
[Unigene: 8681](#) Mouse

[Unigene: 98209](#) Rat

Important Note:

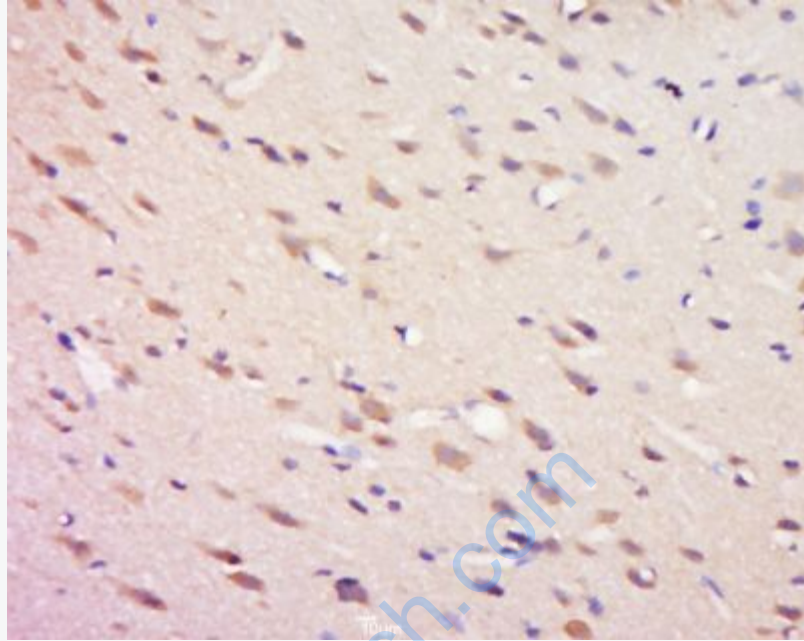
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SHP2(SH-PTP2)参与多种细胞内信号传导 如MAP kinase、PI3k等途径, SHP2也是许多其他原癌基因信号通路的重要组成部分, 在细胞的增殖及分化等过程扮演重要的角色.



Picture:

Paraformaldehyde-fixed, paraffin embedded (Mouse brain); 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 (Phospho-SHP2 (Tyr81)) Polyclonal Antibody, Unconjugated (SL5638R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: Rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Phospho-SHP2(Tyr81)Polyclonal Antibody, Unconjugated(SL5638R) 1:500, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining