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Rabbit Anti-Phospho-SHP2 (Tyr580)/Cy5 Conjugated antibody

SL3405R-Cy5

Product Name	Anti-Phospho-SHP2 (Tyr580)/Cy5
Chinese Name	Cy5 标记的磷酸化蛋白酪氨酸磷酸酶 2 抗体
Alias	SHP2 (phospho Y580); p-SHP2 (phospho Y580); PTPN11(Phospho-Tyr580); PTPN11; PTN11_HUMAN; BPTP 3; BPTP3; CFC; MGC14433; SHP 2; 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; 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.
Product Type	Phosphorylated anti
Research Area	Tumour immunology Signal transduction transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human Mouse Rat(predicted:Chicken Horse)
Applications	IF=1:100-500, Flow-Cyt=1ug/test, ICC/IF=1:25 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	66kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from human PTPN11 around the phosphorylation site of Tyr584
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% 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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

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.

Product Detail

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.

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

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:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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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.