SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Rabbit Anti-Phospho-INPPL1 (Ser576)/HRP Conjugated antibody

Catalog Number: SL3402R-HRP

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-Phospho-INPPL1(Ser576)/HRP
Immunogen:	KLH conjugated Synthesised phosphopeptide derived from human SHIP1 around the phosphorylation site of Ser576
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
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.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Mouse,Rat(predicted:Human,Dog,Pig,Cow,Horse,Rabbit)
Background:	background: 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:** Phosphatidylinositol (PtdIns) phosphatase that specifically

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	hydrolyzes the 5-phosphate of phosphatidylinositol-3,4,5-trisphosphate (PtdIns(3,4,5)P3) to produce PtdIns(3,4)P2, thereby negatively regulating the PI3K (phosphoinositide 3-kinase) pathways. Plays a central role in regulation of PI3K-dependent insulin signaling, although the precise molecular mechanisms and signaling pathways remain unclear. While overexpression reduces both insulin-stimulated MAP kinase and Akt activation, its absence does not affect insulin signaling or GLUT4 trafficking. Confers resistance to dietary obesity. May act by regulating AKT2, but not AKT1, phosphorylation at the plasma membrane. Part of a signaling pathway that regulates actin cytoskeleton remodeling. Required for the maintenance and dynamic remodeling of actin structures as well as in endocytosis, having a major impact on ligand-induced EGFR internalization and degradation. Participates in regulation of cortical and submembraneous actin by hydrolyzing PtdIns(3,4,5)P3 thereby regulating membrane ruffling. Regulates cell adhesion and cell spreading. Required for HGF-mediated lamellipodium formation, cell scattering and spreading. Acts as a negative regulator of EPHA2 receptor endocytosis by inhibiting via PI3K-dependent Rac1 activation. Acts as a regulator of neuritogenesis by regulating PtdIns(3,4,5)P3 level and is required to form an initial protrusive pattern, and later, maintain proper neurite outgrowth. Acts as a negative regulator of the FC-gamma-RIIA receptor (FCGR2A). Mediates signaling from the FC-gamma-RIIB receptor (FCGR2B), playing a central role in terminating signal transduction from activating immune/hematopoietic cell receptor systems. Involved in EGF signaling pathway. Upon stimulation by EGF, it is recruited by EGFR and dephosphorylates PtdIns(3,4,5)P3. Plays a negative role in regulating the PI3K-PKB pathway, possibly by inhibiting PKB activity. Down-regulates Fc-gamma-R-mediated phagocytosis in macrophages independently of INPP5D/SHIP1. In macrophages, down-regulates NF-kappa-B-dependent gene transcription by regulating macrophage colony-stimulating factor (M-CSF)-induced signaling. May also hydrolyze PtdIns(1,3,4,5)P4, and could thus affect the levels of the higher inositol polyphosphates like InsP6 **Subunit:** Interacts with tyrosine phosphorylated form of SHC1, Interacts with EGFR. Upon stimulation by the EGF signaling pathway, it forms a complex with SHC1 and EGFR. Interacts with cytoskeletal protein SORBS3/vinexin, promoting its localization to the periphery of cells. Forms a complex with filamin (FLNA or FLNB), actin, GPIb (GP1BA or GP1BB) that regulates cortical and submembraneous actin. Interacts with c-Met/MET, when c-Met/MET is phosphorylated on 'Tyr-1356'. Interacts with p130Cas/BCAR1.

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	Interacts with CENTD3/ARAP3 via its SAM domain. Interacts with c-Cbl/CBL and CAP/SORBS1. Interacts with activated EPHA2 receptor. Interacts with receptors FCGR2A and FCGR2B. Interacts with tyrosine kinases ABL1 and TEC. Interacts with CSF1R. **Subcellular Location:** Cytoplasm, cytosol. Cytoplasm, cytoskeleton, actin patch. Membrane; Peripheral membrane protein. **Tissue Specificity:** Widely expressed, most prominently in skeletal muscle, heart and brain. Present in platelets. Expressed in transformed myeloid cells and in primary macrophages, but not in peripheral blood monocytes. **Post-translational modifications:** Tyrosine phosphorylated by the members of the SRC family after exposure to a diverse array of extracellular stimuli such as insulin, growth factors such as EGF or PDGF, chemokines, integrin ligands and hypertonic and oxidative stress. May be phosphorylated upon IgG receptor FCGR2B-binding. Phosphorylated at Tyr-986 following cell attachment and spreading. Phosphorylated at Tyr-1162 following EGF signaling pathway stimulation. Phosphorylated at Thr-958 in response to PDGF. DISEASE: Defects in INPPL1 may be a cause of susceptibility to type 2 diabetes mellitus non-insulin dependent (NIDDM) [MIM:125853]. Note=Genetic variations in INPPL1 may be a cause of susceptibility to metabolic syndrome. Metabolic syndrome is characterized by diabetes, insulin resistance, hypertension, and hypertriglyceridemia is absent. **Similarity:** Belongs to the inositol 1,4,5-trisphosphate 5-phosphatase family. Contains 1 SAM (sterile alpha motif) domain. Contains 1 SH2 domain. **Database links:** **Entrez Gene:** 3636 Human **Entrez Gene:** 16332 Mouse **Entrez Gene:** 65038 Rat Omim: 600829 Human **SwissProt:** O15357 Human **SwissProt:** Q6P549 Mouse **SwissProt:** Q9WVR3 Rat **Unigene:** 523875 Human **Unigene:** 476000 Mouse **Unigene:** 5028 Mouse **Unigene:** 42902 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) is involved in multiple intracellular signaling pathways such as MAP kinase and PI3K, and is also an important component of many other proto-oncogene signaling pathways, playing a key role in processes such as cell proliferation and differentiation.

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