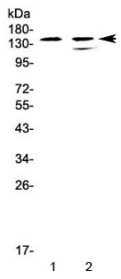
SHIP1 Antibody / INPP5D Polyclonal Antibody (RQ4421)

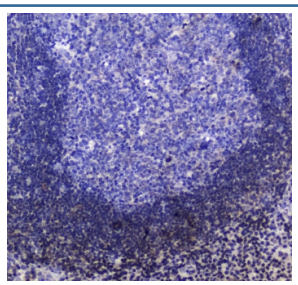
Catalog No.	Formulation	Size
RQ4421	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

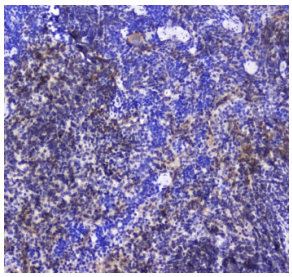
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q92835
Localization	Membrane, cytoplasm
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This SHIP1 Antibody / INPP5D Polyclonal Antibody is available for research use only.



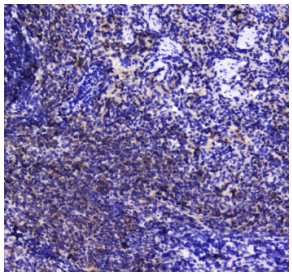
SHIP1 Antibody WB Analysis of Human CCRF-CEM and SW620 Cell Lysates. Western blot analysis of human CCRF-CEM (lane 1) and SW620 (lane 2) cell lysates using INPP5D Polyclonal Antibody at 0.5 ug/ml. Immunoreactive bands are detected near the 130 kDa molecular weight marker in both samples, consistent with the predicted molecular weight of approximately 133 kDa for INPP5D.



SHIP1 Antibody IHC Staining of Human Tonsil Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human tonsil tissue using INPP5D Polyclonal Antibody at 1 ug/ml. Brown immunoreactivity is observed in portions of the densely cellular lymphoid tissue, with heterogeneous staining distribution. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes.



SHIP1 Antibody IHC Staining of Mouse Spleen Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded mouse spleen tissue using INPP5D Polyclonal Antibody at 1 ug/ml. Brown immunoreactivity is distributed among cells within the splenic tissue, with regional variation in staining intensity. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes.



SHIP1 Antibody IHC Staining of Rat Spleen Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat spleen tissue using INPP5D Polyclonal Antibody at 1 ug/ml. Heterogeneous brown immunoreactivity is observed throughout portions of the splenic tissue, with areas of more prominent staining interspersed among regions exhibiting weaker signal. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes.

Description

SHIP1 Antibody / INPP5D Polyclonal Antibody targets SHIP1, an SH2 domain-containing inositol 5-phosphatase encoded by the INPP5D gene. This enzyme regulates phosphoinositide signaling and contributes to the control of immune-cell activation, proliferation, migration, and survival. SHIP1 hydrolyzes phosphatidylinositol 3,4,5-trisphosphate (PIP3) to generate phosphatidylinositol 3,4-bisphosphate (PI(3,4)P2), modifying the lipid signals that recruit regulatory proteins to cellular membranes. Through this activity, SHIP1 influences signaling pathways downstream of immune receptors, cytokine receptors, and growth factor receptors.

The N-terminal Src homology 2 (SH2) domain of SHIP1 recognizes phosphorylated tyrosine-containing motifs within receptor-associated signaling complexes. This interaction helps recruit the enzyme to membrane-proximal regions where phosphoinositide signaling occurs. SHIP1 also contains a catalytic phosphatase domain and C-terminal regions that interact with adaptor proteins, including SHC1 and DOK-family proteins. These structural features allow SHIP1 to function as both a lipid-modifying enzyme and a component of multiprotein signaling assemblies.

SHIP1 is particularly important in hematopoietic cells. In B lymphocytes, recruitment of SHIP1 downstream of the inhibitory Fc gamma RIIB receptor helps restrain activation signals initiated through the B-cell receptor. In myeloid cells, SHIP1 regulates responses associated with cytokine signaling, chemotaxis, and inflammatory activation. Its effects depend on receptor engagement and the relative activities of other phosphoinositide-modifying enzymes. Because PI(3,4)P2 also participates in signal transduction, SHIP1 activity can redirect signaling rather than simply terminate it.

SHIP1 shares catalytic functions with SHIP2, encoded by INPPL1, but the two proteins differ in their expression patterns and physiological roles. SHIP1 is strongly associated with hematopoietic signaling, whereas SHIP2 is more broadly expressed. These differences are relevant when investigating phosphoinositide regulation in distinct cellular environments.

Altered INPP5D function has been investigated in immune dysregulation, hematologic malignancies, and neuroinflammatory disease. Microglial SHIP1 has attracted particular attention because genetic studies implicate INPP5D in susceptibility to Alzheimer's disease. SHIP1 Antibody supports investigations into immune receptor regulation, phosphoinositide metabolism, and the molecular mechanisms governing hematopoietic cell homeostasis.

For an alternative reagent with knockout-supported Western blot specificity validation and intracellular flow cytometry data, explore our INPP5D Antibody (RQ8586).

Application Notes

Optimal dilution of the SHIP1 Antibody / INPP5D Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids NEDDKFTVQASEGVSMRFFTKLDQLIEFYKKENMGLVTHLQ from the human protein were used as the immunogen for the SHIP1 antibody.

Storage

After reconstitution, the SHIP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

SH2-Containing Inositol Phosphatase 1 antibody, SH2 Domain-Containing Inositol 5-Phosphatase 1 antibody, Inositol Polyphosphate-5-Phosphatase D antibody, Inositol Polyphosphate 5-Phosphatase D antibody, Phosphatidylinositol-3,4,5-Trisphosphate 5-Phosphatase 1 antibody, SHIP-1 antibody, SIP-145 antibody, Inositol Polyphosphate-5-Phosphatase of 145 kDa antibody, SHIP1 Lipid Phosphatase antibody, INPP5D Inositol Phosphatase antibody

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