

## INPP5D Antibody (Center) Blocking Peptide

Synthetic peptide  
Catalog # BP2845c

### Specification

#### INPP5D Antibody (Center) Blocking Peptide - Product Information

Primary Accession [Q92835](#)

#### INPP5D Antibody (Center) Blocking Peptide - Additional Information

Gene ID 3635

#### Other Names

Phosphatidylinositol 3, 5-trisphosphate 5-phosphatase 1, Inositol polyphosphate-5-phosphatase of 145 kDa, SIP-145, SH2 domain-containing inositol 5'-phosphatase 1, SH2 domain-containing inositol phosphatase 1, SHIP-1, p150Ship, hp51CN, INPP5D, SHIP, SHIP1

#### Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP2845c](/products/AP2845c) was selected from the Center region of human INPP5D. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

#### Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

#### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

#### INPP5D Antibody (Center) Blocking Peptide -

#### INPP5D Antibody (Center) Blocking Peptide - Background

INPP5D is a member of the inositol polyphosphate-5-phosphatase (INPP5) family and it is a protein with an N-terminal SH2 domain, an inositol phosphatase domain, and two C-terminal protein interaction domains. Expression of this protein is restricted to hematopoietic cells where its movement from the cytosol to the plasma membrane is mediated by tyrosine phosphorylation. At the plasma membrane, the protein hydrolyzes the 5' phosphate from phosphatidylinositol (3,4,5)-trisphosphate and inositol-1,3,4,5-tetrakisphosphate, thereby affecting multiple signaling pathways. Overall, the protein functions as a negative regulator of myeloid cell proliferation and survival.

#### INPP5D Antibody (Center) Blocking Peptide - References

Gilby, D.C., Leukemia 21 (11), 2390-2393 (2007) Gloire, G., Biochem. Soc. Trans. 35 (PT 2), 277-280 (2007) Vaillancourt, M., Cell. Signal. 18 (11), 2022-2032 (2006)

## Protein Information

### Name INPP5D

### Synonyms SHIP

{ECO:0000303|PubMed:10764818}, SHIP

### Function

Phosphatidylinositol (PtdIns) phosphatase that specifically 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 (PubMed:<a href="http://www.uniprot.org/citations/8723348" target="\_blank">8723348</a>, PubMed:<a href="http://www.uniprot.org/citations/10764818" target="\_blank">10764818</a>, PubMed:<a href="http://www.uniprot.org/citations/8769125" target="\_blank">8769125</a>). Able also to hydrolyzes the 5-phosphate of phosphatidylinositol-4,5-bisphosphate (PtdIns(4,5)P3) and inositol 1,3,4,5-tetrakisphosphate (PubMed:<a href="http://www.uniprot.org/citations/9108392" target="\_blank">9108392</a>, PubMed:<a href="http://www.uniprot.org/citations/10764818" target="\_blank">10764818</a>, PubMed:<a href="http://www.uniprot.org/citations/8769125" target="\_blank">8769125</a>). Acts as a negative regulator of B- cell antigen receptor signaling. Mediates signaling from the FC-gamma- RIIB receptor (FCGR2B), playing a central role in terminating signal transduction from activating immune/hematopoietic cell receptor systems. Acts as a negative regulator of myeloid cell proliferation/survival and chemotaxis, mast cell degranulation, immune cells homeostasis, integrin alpha-IIb/beta-3 signaling in platelets and JNK signaling in B-cells. Regulates proliferation of osteoclast precursors, macrophage programming, phagocytosis and activation and is required for endotoxin tolerance. Involved in the control of cell-cell junctions, CD32a signaling in neutrophils and modulation of EGF-induced phospholipase C activity (PubMed:<a href="http://www.uniprot.org/citations/16682172" target="\_blank">16682172</a>). Key regulator of neutrophil migration, by

governing the formation of the leading edge and polarization required for chemotaxis. Modulates FCGR3/CD16-mediated cytotoxicity in NK cells. Mediates the activin/TGF-beta-induced apoptosis through its Smad-dependent expression.

#### **Cellular Location**

Cytoplasm. Cell membrane  
{ECO:0000250|UniProtKB:Q9ES52};  
Peripheral membrane protein  
{ECO:0000250|UniProtKB:Q9ES52}.  
Membrane raft  
{ECO:0000250|UniProtKB:Q9ES52}.  
Cytoplasm, cytoskeleton  
{ECO:0000250|UniProtKB:Q9ES52}.  
Membrane; Peripheral membrane protein  
Note=Translocates to the plasma membrane when activated, translocation is probably due to different mechanisms depending on the stimulus and cell type. Translocates from the cytoplasm to membrane ruffles in a FCGR3/CD16-dependent manner. Colocalizes with FC-gamma-RIIB receptor (FCGR2B) or FCGR3/CD16 at membrane ruffles. Tyrosine phosphorylation may also participate in membrane localization  
{ECO:0000250|UniProtKB:Q9ES52}

#### **Tissue Location**

Specifically expressed in immune and hematopoietic cells. Expressed in bone marrow and blood cells. Levels vary considerably within this compartment. Present in at least 74% of immature CD34+ cells, whereas within the more mature population of CD33+ cells, it is present in only 10% of cells. Present in the majority of T-cells, while it is present in a minority of B-cells (at protein level).

### **INPP5D Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)