

Anti-PIP5K1C Antibody
Rabbit polyclonal antibody to PIP5K1C
Catalog # AP59817

Specification

Anti-PIP5K1C Antibody - Product Information

Application	WB
Primary Accession	O60331
Other Accession	O70161
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	73260

Anti-PIP5K1C Antibody - Additional Information

Gene ID 23396

Other Names

KIAA0589; Phosphatidylinositol 4-phosphate 5-kinase type-1 gamma; PIP5K1-gamma; PtdIns(4)P-5-kinase 1 gamma; Phosphatidylinositol 4-phosphate 5-kinase type I gamma; PIP5K1gamma

Target/Specificity

Recognizes endogenous levels of PIP5K1C protein.

Dilution

WB~~WB (1/500 - 1/1000)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-PIP5K1C Antibody - Protein Information

Name PIP5K1C ([HGNC:8996](#))

Synonyms KIAA0589

Function

Catalyzes the phosphorylation of phosphatidylinositol 4- phosphate (PtdIns(4)P/PI4P) to form phosphatidylinositol 4,5- bisphosphate (PtdIns(4,5)P2/PIP2), a lipid second messenger that regulates several cellular processes such as signal transduction, vesicle trafficking, actin cytoskeleton dynamics, cell adhesion, and cell motility (PubMed:12422219, PubMed:<a

[22942276](http://www.uniprot.org/citations/22942276)). PtdIns(4,5)P₂ can directly act as a second messenger or can be utilized as a precursor to generate other second messengers: inositol 1,4,5-trisphosphate (IP₃), diacylglycerol (DAG) or phosphatidylinositol-3,4,5-trisphosphate (PtdIns(3,4,5)P₃/PIP₃) (Probable). PIP5K1A-mediated phosphorylation of PtdIns(4)P is the predominant pathway for PtdIns(4,5)P₂ synthesis (By similarity). Together with PIP5K1A, is required for phagocytosis, both enzymes regulating different types of actin remodeling at sequential steps (By similarity). Promotes particle attachment by generating the pool of PtdIns(4,5)P₂ that induces controlled actin depolymerization to facilitate Fc-gamma-R clustering. Mediates RAC1-dependent reorganization of actin filaments. Required for synaptic vesicle transport (By similarity). Controls the plasma membrane pool of PtdIns(4,5)P₂ implicated in synaptic vesicle endocytosis and exocytosis (PubMed:[12847086](http://www.uniprot.org/citations/12847086)). Plays a role in endocytosis mediated by clathrin and AP-2 (adaptor protein complex 2) (PubMed:[12847086](http://www.uniprot.org/citations/12847086)). Required for clathrin-coated pits assembly at the synapse (PubMed:[17261850](http://www.uniprot.org/citations/17261850)). Participates in cell junction assembly (PubMed:[17261850](http://www.uniprot.org/citations/17261850)). Modulates adherens junctions formation by facilitating CDH1/cadherin trafficking (PubMed:[17261850](http://www.uniprot.org/citations/17261850)). Required for focal adhesion dynamics. Modulates the targeting of talins (TLN1 and TLN2) to the plasma membrane and their efficient assembly into focal adhesions (PubMed:[12422219](http://www.uniprot.org/citations/12422219)). Regulates the interaction between talins (TLN1 and TLN2) and beta-integrins (PubMed:[12422219](http://www.uniprot.org/citations/12422219)). Required for uropodium formation and retraction of the cell rear during directed migration (By similarity). Has a role in growth factor-stimulated directional cell migration and adhesion (By similarity). Required for talin assembly into nascent adhesions forming at the leading edge toward the direction of the growth factor (PubMed:[17635937](http://www.uniprot.org/citations/17635937)). Negative regulator of T-cell activation and adhesion (By similarity). Negatively regulates integrin alpha-L/beta-2 (LFA-1) polarization and adhesion induced by T-cell receptor (By similarity). Together with PIP5K1A has a role during embryogenesis and together with PIP5K1B may have a role immediately after birth (By similarity).

Cellular Location

Cell membrane; Peripheral membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:Q516B8}. Endomembrane system {ECO:0000250|UniProtKB:Q516B8}. Cytoplasm {ECO:0000250|UniProtKB:O70161}. Cell junction, focal adhesion. Cell junction, adherens junction. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:Q516B8}. Cell projection, phagocytic cup {ECO:0000250|UniProtKB:O70161}. Cell projection, uropodium {ECO:0000250|UniProtKB:O70161}. Note=Detected in plasma membrane invaginations. Isoform 3 is detected in intracellular vesicle-like structures

Tissue Location

[Isoform 1]: Isoform 1 is strongly expressed in brain and also detected in heart and lung [Isoform 3]: Isoform 3 is detected in large amounts in heart and large intestine, is also present in lung, pancreas and thyroid, and to a lesser extent in brain, stomach and kidney

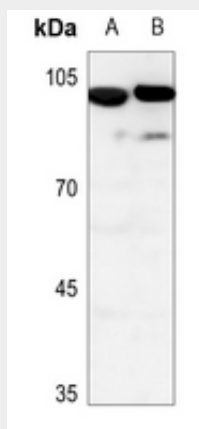
Anti-PIP5K1C Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-PIP5K1C Antibody - Images



Western blot analysis of PIP5K1C expression in HeLa (A), A549 (B) whole cell lysates.

Anti-PIP5K1C Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PIP5K1C. The exact sequence is proprietary.