

Rabbit anti-Human PIP5K1C Polyclonal Antibody | anti-PIP5K1C antibody

PIP5K1C Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA324950	Rabbit	Human	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

PIP5K1C; Polyclonal Antibody; PIP5K1C Antibody; Diphosphoinositide kinase; LCCS3; Phosphatidylinositol-4-phosphate 5-kinase type I gamma; Phosphatidylinositol-4-phosphate 5-kinase type-1 gamma; PI51C; PI51C_HUMAN; PIP5K GAMMA; PIP5K1-gamma; Pip5k1c; PIP5K1gamma; PtdIns(4)P 5 kinase gamma; PtdIns(4)P-5-kinase 1 gamma; Type I PIP kinase; anti-PIP5K1C antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	IgG
Specificity	PIP5K1C antibody detects endogenous levels of total PIP5K1C
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	640
Applicable Applications for anti-PIP5K1C antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide
Subcellular Location	Cell Membrane. Cytoplasmic, associated with the plasma membrane. Detected in focal adhesion plaques, membrane ruffles and plasma membrane invaginations.
Tissue Specificity	Isoform 1 is strongly expressed in brain and also detected in heart and lung. Isoform 2 is strongly expressed in pancreas and liver and in lesser quantities in brain, heart, lung and kidney. 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.
Predicted Cross Reactivity	Pig, Bovine, Sheep, Dog, Chicken
Similarity	Pig (90%), Bovine (90%), Sheep (90%), Dog (90%), Chicken (90%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA324950 staining A549 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of extracts from A549 cells, using PIP5K1C antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PIP5K1C antibody

Function: Catalyzes the phosphorylation of phosphatidylinositol 4-phosphate (PtdIns4P) to form phosphatidylinositol 4, 5-bisphosphate (PtdIns(4, 5)P2). PtdIns(4, 5)P2 is involved in a variety of cellular processes and is the substrate to form phosphatidylinositol 3, 4, 5-trisphosphate (PtdIns(3, 4, 5)P3), another second messenger. The majority of PtdIns(4, 5)P2 is thought to occur via type I phosphatidylinositol 4-phosphate 5-kinases given the abundance of PtdIns4P. Participates in a variety of cellular processes such as vesicle mediated transport, cell adhesion, cell polarization and cell migration. Together with PIP5K1A is required for phagocytosis, but they regulate different types of actin remodeling at sequential steps. 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. Controls the plasma membrane pool of PtdIns(4, 5)P2 implicated in synaptic vesicle endocytosis and exocytosis. Plays a role in endocytosis mediated by clathrin and AP-2 (adaptor protein complex 2). Required for clathrin-coated pits assembly at the synapse. Participates in cell junction assembly. Modulates adherens junctions formation by facilitating CDH1 trafficking. Required for focal adhesion dynamics. Modulates the targeting of talins (TLN1 and TLN2) to the plasma membrane and their efficient assembly into focal adhesions. Regulates the interaction between talins (TLN1 and TLN2) and beta-integrins. Required for uropodium formation and retraction of the cell rear during directed migration. Has a role in growth factor-stimulated directional cell migration and adhesion. Required for talin assembly into nascent adhesions forming at the leading edge toward the direction of the growth factor. Negative regulator of T-cell activation and adhesion. Negatively regulates integrin alpha-L/beta-2 (LFA-1) polarization and adhesion induced by T-cell receptor. Together with PIP5K1A has a role during embryogenesis and together with PIP5K1B may have a role immediately after birth.

Subunit Structure: Interacts with TLN1 (By similarity). Interacts with TLN2; interaction stimulates lipid kinase activity. May compete with beta-integrins for the same binding site on TLN1 and TLN2. Interacts with ARF6. Interacts with AP2B1. Interacts with AP2M1; phosphorylation of PIP5K1C by CSK disrupts the interaction; clathrin competes with PIP5K1C (By similarity). Interacts with CDH1. Interacts with CSK (By similarity). Interacts with PLCG1; interaction is abolished upon EGF stimulation (By similarity). Interacts with LAPTM4B; promotes SNX5 association with LAPTM4B; kinase activity of PIP5K1C is required; interaction is regulated by phosphatidylinositol 4, 5-bisphosphate generated by PIP5K1C (PubMed:25588945).

Post-translational Modifications: Phosphorylation on Ser-650 negatively regulates binding to TLN2 and is strongly stimulated in mitosis. Phosphorylation on Tyr-649 is necessary for targeting to focal adhesions. Phosphorylation on Ser-650 and Tyr-649 are mutually exclusive. Phosphorylated by SYK and CSK (By similarity). Tyrosine phosphorylation is enhanced by PTK2 signaling. Phosphorylated at Tyr-639 upon EGF stimulation. Some studies suggest that phosphorylation on Tyr-649 enhances binding to tailins (TLN1 and TLN2). According to PubMed:15738269 phosphorylation at Tyr-649 does not directly enhance binding to tailins (TLN1 and TLN2) but may act indirectly by inhibiting phosphorylation at Ser-650. Acetylation at Lys-265 and Lys-268 seems to decrease lipid kinase activity. Deacetylation of these sites by SIRT1 positively regulates the exocytosis of TSH-containing granules from pituitary cells.

NCBI AND UNIPROT INFORMATION

NCBI GI #	307691174
NCBI GeneID	23396
NCBI Accession #	NP_001182662.1
NCBI GenBank Nucleotide #	NM_001195733.1
UniProt Accession #	O60331; Q7LE07; B7Z9E7; C6GIJ7; C6GIJ8

Molecular Weight	Observed: 80 kD Predicted: 74 kDa
NCBI Official Full Name	phosphatidylinositol 4-phosphate 5-kinase type-1 gamma isoform 1
NCBI Official Synonym Full Names	phosphatidylinositol-4-phosphate 5-kinase type 1 gamma
NCBI Official Symbol	PIP5K1C
NCBI Official Synonym Symbols	LCCS3; PIP5Kgamma; PIP5K-GAMMA; PIP5K1-gamma
NCBI Protein Information	phosphatidylinositol 4-phosphate 5-kinase type-1 gamma
UniProt Protein Name	Phosphatidylinositol 4-phosphate 5-kinase type-1 gamma
UniProt Gene Name	PIP5K1C
UniProt Synonym Gene Names	KIAA0589; PIP5K1-gamma; PtdIns(4)P-5-kinase 1 gamma; PIP5Klgamma

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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