

Anti-PIP5K Antibody
Catalog # ABV11968**Specification**

Anti-PIP5K Antibody - Product Information

Application	WB, IF
Primary Accession	Q9Y2I7
Reactivity	Human, Rat
Host	Rabbit
Isotype	Rabbit IgG
Calculated MW	237136

Anti-PIP5K Antibody - Additional Information**Gene ID** 200576

Positive Control	WB: A549, HepG2, PC3, rat testis lysates; IF/IC: HepG2 cells
Application & Usage	WB; 1:500 - 1:2000, IF/IC; 1:50 - 1:100

Other Names

KIAA0981; PIP5K3; 1-phosphatidylinositol 3-phosphate 5-kinase; Phosphatidylinositol 3-phosphate 5-kinase; FYVE finger-containing phosphoinositide kinase; PIKfyve; Phosphatidylinositol 3-phosphate 5-kinase type III; PIPkin-III; Type III PIP kinase

Target/Specificity

PIP5K

Antibody Form

Liquid

Appearance

Colorless liquid

Handling

The antibody solution should be gently mixed before use

Reconstitution & Storage

-20°C

Background Descriptions**Precautions**

Anti-PIP5K Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-PIP5K Antibody - Protein Information

Name PIKFYVE ([HGNC:23785](#))

Synonyms KIAA0981, PIP5K3

Function

Dual specificity kinase implicated in myriad essential cellular processes such as maintenance of endomembrane homeostasis, and endocytic-vacuolar pathway, lysosomal trafficking, nuclear transport, stress- or hormone-induced signaling and cell cycle progression (PubMed:23086417). The PI(3,5)P2 regulatory complex regulates both the synthesis and turnover of phosphatidylinositol 3,5-bisphosphate (PtdIns(3,5)P2). Sole enzyme to catalyze the phosphorylation of phosphatidylinositol 3-phosphate on the fifth hydroxyl of the myo- inositol ring, to form (PtdIns(3,5)P2) (PubMed:17556371). Also catalyzes the phosphorylation of phosphatidylinositol on the fifth hydroxyl of the myo-inositol ring, to form phosphatidylinositol 5- phosphate (PtdIns(5)P) (PubMed:22621786). Has serine-protein kinase activity and is able to autophosphorylate and transphosphorylate. Autophosphorylation inhibits its own phosphatidylinositol 3-phosphate 5-kinase activity, stimulates FIG4 lipid phosphatase activity and down- regulates lipid product formation (PubMed:33098764). Involved in key endosome operations such as fission and fusion in the course of endosomal cargo transport (PubMed:22621786). Required for the maturation of early into late endosomes, phagosomes and lysosomes (PubMed:30612035). Regulates vacuole maturation and nutrient recovery following engulfment of macromolecules, initiates the redistribution of accumulated lysosomal contents back into the endosome network (PubMed:27623384). Critical regulator of the morphology, degradative activity, and protein turnover of the endolysosomal system in macrophages and platelets (By similarity). In neutrophils, critical to perform chemotaxis, generate ROS, and undertake phagosome fusion with lysosomes (PubMed:28779020). Plays a key role in the processing and presentation of antigens by major histocompatibility complex class II (MHC class II) mediated by CTSS (PubMed:30612035). Regulates melanosome biogenesis by controlling the delivery of proteins from the endosomal compartment to the melanosome (PubMed:29584722). Essential for systemic glucose homeostasis, mediates insulin-induced signals for endosome/actin remodeling in the course of GLUT4 translocation/glucose uptake activation (By similarity). Supports microtubule-based endosome- to-trans-Golgi network cargo transport, through association with SPAG9 and RABEPK (By similarity). Mediates EGFR trafficking to the nucleus (PubMed:17909029).

Cellular Location

Endosome membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9Z1T6}. Early endosome membrane; Peripheral membrane protein. Cytoplasmic vesicle, phagosome membrane; Peripheral membrane protein. Late endosome membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9Z1T6}. Note=Mainly associated with membranes of the late endocytic pathway.

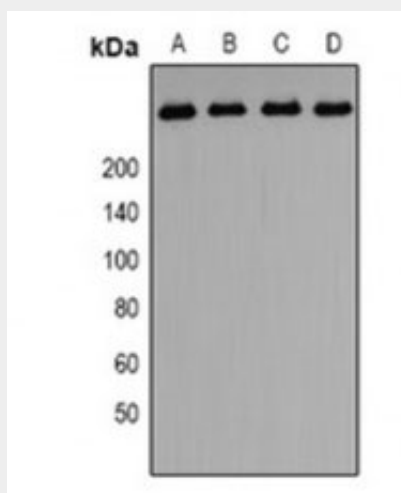
Anti-PIP5K Antibody - Protocols

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

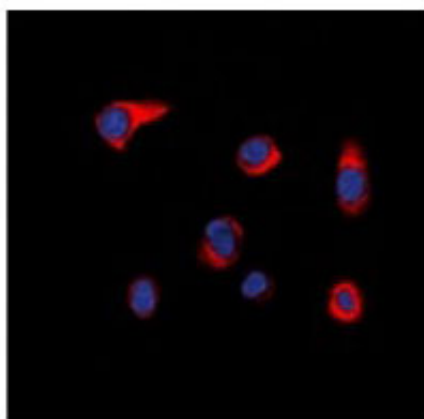
- [Western Blot](#)
- [Blocking Peptides](#)

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

Anti-PIP5K Antibody - Images



WB analysis of PIP5K expression in A549 (A); HepG2 (B); PC3 (C) rat testis (D) whole cell lysates.



Immunofluorescent analysis of PIP5K staining in HepG2 cells