Product Name: PIP5KIII Rabbit Polyclonal Antibody
Catalog #: APRab16161

Summary

Production Name	PIP5KIII Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IF,WB,
Reactivity	Human,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	PIKFYVE
Alternative Names	PIKFYVE; 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
Gene ID	200576.0
SwissProt ID	Q9Y2I7.The antiserum was produced against synthesized peptide derived from human PIP5K. AA range:71-120

Application

Dilution Ratio	WB 1:500-2000;IF ICC 1:100-500; ELISA 2000-20000
Molecular Weight	237kD

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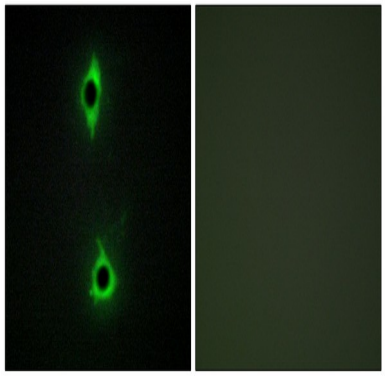
Background

Phosphorylated derivatives of phosphatidylinositol (PtdIns) regulate cytoskeletal functions, membrane trafficking, and receptor signaling by recruiting protein complexes to cell- and endosomal-membranes. Humans have multiple PtdIns proteins that differ by the degree and position of phosphorylation of the inositol ring. This gene encodes an enzyme (PIKfyve; also known as phosphatidylinositol-3-phosphate 5-kinase type III or PIPKIII) that phosphorylates the D-5 position in PtdIns and phosphatidylinositol-3-phosphate (PtdIns3P) to make PtdIns5P and PtdIns(3,5)biphosphate. The D-5 position also can be phosphorylated by type I PtdIns4P-5-kinases (PIP5Ks) that are encoded by distinct genes and preferentially phosphorylate D-4 phosphorylated PtdIns. In contrast, PIKfyve preferentially phosphorylates D-3 phosphorylated PtdIns. In addition to being a lipid kinase, PIKfcatalytic activity:ATP + 1-phosphatidyl-1D-myo-inositol 4-phosphate = ADP + 1-phosphatidyl-1D-myo-inositol 4,5-bisphosphate.,disease:Defects in PIKFYVE are the cause of corneal fleck dystrophy (CFD) [MIM:121850]. CFD is an autosomal dominant disorder of the cornea characterized by numerous small white flecks scattered in all levels of the stroma. Although CFD may occasionally cause mild photophobia, patients are typically asymptomatic and have normal vision.,function:Supports the intracellular PIP pool and to a lesser extent, the PI 4,5-P(2) pool. It generates PIP from PI and, to a lesser extent, PI 4,5-P(2) from PI 4-P. There are indications that it phosphorylates the D-5 rather than the D-4 position. Has a role in endosome-related membrane trafficking.,similarity:Contains 1 DEP domain.,similarity:Contains 1 FYVE-type zinc finger.,similarity:Contains 1 PI5K domain.,subcellular location:Mainly associated with membranes of the late endocytic pathway.,

Research Area

Inositol phosphate metabolism;Phosphatidylinositol signaling system;Endocytosis;Fc gamma R-mediated phagocytosis;Regulates Actin and Cytoskeleton;

Image Data



Immunofluorescence analysis of COS7 cells, using PIP5K Antibody. The picture on the right is blocked with the synthesized peptide.

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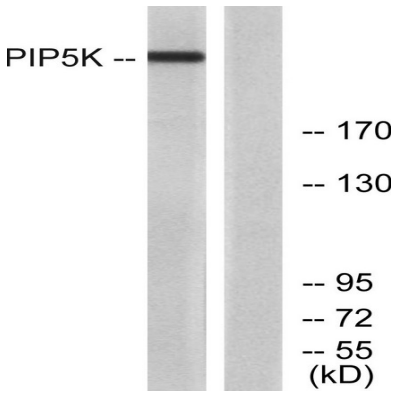
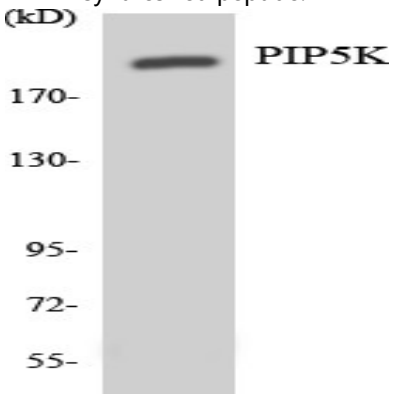
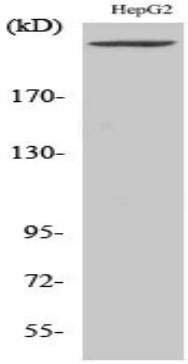


Western blot analysis of lysates from HepG2 cells, using PIP5K Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from Jurkat cells using PIP5K antibody.



Western Blot analysis of various cells using PIP5KIII Polyclonal Antibody

Note

For research use only.