PIKFYVE Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PIKFYVE, Polyclonal Antibody
Full Product Name	PIKFYVE Rabbit pAb
Product Gene Name	anti-PIKFYVE antibody
Product Synonym Names	CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.02% Sodium Azide, 50% Glycerol, pH 7.3.
Purity/Purification	Affinity Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	280kDa
OMIM	121850
3D Structure	ModBase 3D Structure for Q9Y2I7
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 172-451 of human PIKFYVE (NP_689884.1).
Cellular Localization	Endosome, Membrane
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-PIKFYVE antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)
Application Notes for anti-PIKFYVE antibody	WB: 1:500-1:2000 IHC: 1:50-1:100 IF: 1:10-1:100
Related Product Information for anti-PIKFYVE antibody	The PI(3,5)P2 regulatory complex regulates both the synthesis and turnover of phosphatidylinositol 3,5-bisphosphate (PtdIns(3,5)P2). Catalyzes the phosphorylation of phosphatidylinositol 3-phosphate on the fifth hydroxyl of the myo-inositol ring, to form phosphatidylinositol 3,5-bisphosphate. Required for endocytic-vacuolar pathway and nuclear migration. Plays a role in the biogenesis of endosome carrier vesicles (ECV)/ multivesicular bodies (MVB) transport intermediates from early endosomes.
Other Notes	Small volumes of anti-PIKFYVE antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PIKFYVE purchase	MBS8546292 is an antibody targeting PIKFYVE. Also known as PIKFYVE Rabbit pAb. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PIKFYVE. It may not necessarily be applicable to this product.

NCBI GI #	295789162

NCBI GeneID	200576
NCBI Accession #	NP_001171471.1
UniProt Primary Accession #	Q9Y2I7
UniProt Related Accession #	Q9Y2I7
GenBank Nucleotide #	NP_001171471.1
NCBI Official Full Name	1-phosphatidylinositol 3-phosphate 5-kinase isoform 4
NCBI Official Synonym Full Names	phosphoinositide kinase, FYVE-type zinc finger containing
NCBI Official Symbol	PIKFYVE
NCBI Official Synonym Symbols	CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29
UniProt Protein Name	1-phosphatidylinositol 3-phosphate 5-kinase
UniProt Synonym Protein Names	FYVE finger-containing phosphoinositide kinase; PIKfyve; Phosphatidylinositol 3-phosphate 5-kinase type III
Protein Family	1-phosphatidylinositol 3-phosphate 5-kinase
UniProt Gene Name	PIKFYVE
UniProt Synonym Gene Names	KIAA0981; PIP5K3; Phosphatidylinositol 3-phosphate 5-kinase; PIPkin-III
UniProt Entry Name	FYV1_HUMAN
NCBI Protein Information	1-phosphatidylinositol 3-phosphate 5-kinase
NCBI Summary for PIKFYVE	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, PIKfyve also has protein kinase activity. PIKfyve regulates endomembrane homeostasis and plays a role in the biogenesis of endosome carrier vesicles from early endosomes. Mutations in this gene cause corneal fleck dystrophy (CFD); an autosomal dominant disorder characterized by numerous small white flecks present in all layers of the corneal stroma. Histologically, these flecks appear to be keratocytes distended with lipid and mucopolysaccharide filled intracytoplasmic vacuoles. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, May 2010]

UniProt Comments for PIKFYVE	PIKFYVE: The PI(3,5)P2 regulatory complex regulates both the synthesis and turnover of phosphatidylinositol 3,5-bisphosphate (PtdIns(3,5)P2). Catalyzes the phosphorylation of phosphatidylinositol 3-phosphate on the fifth hydroxyl of the myo- inositol ring, to form phosphatidylinositol 3,5-bisphosphate. Required for endocytic-vacuolar pathway and nuclear migration. Plays a role in the biogenesis of endosome carrier vesicles (ECV)/ multivesicular bodies (MVB) transport intermediates from early endosomes. Defects in PIKFYVE are the cause of corneal fleck dystrophy (CFD). 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. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Kinase, lipid; Carbohydrate Metabolism - inositol phosphate; Motility/polarity/chemotaxis; EC 2.7.1.150 Chromosomal Location of Human Ortholog: 2q34 Cellular Component: Golgi membrane; perinuclear region of cytoplasm; early endosome membrane; late endosome membrane; endosome membrane; cytoplasmic vesicle; intercellular junction; cytosol; lipid raft Molecular Function: protein binding; 1-phosphatidylinositol-3-phosphate 5-kinase activity; 1-phosphatidylinositol-4-phosphate 5-kinase activity; phosphatidylinositol-3,5-bisphosphate 5-phosphatase activity; metal ion binding; ATP binding Biological Process: myelin formation; receptor-mediated endocytosis; cellular protein metabolic process; phosphoinositide phosphorylation; phospholipid metabolic process; phosphatidylinositol biosynthetic process; retrograde transport, endosome to Golgi Disease: Corneal Dystrophy, Fleck
Research Articles on PIKFYVE	**1.** this study shows that PIKfyve coordinates the neutrophil immune response through the activation of the Rac GTPase
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