

Product datasheet for PH312288

PIP5K3 (PIKFYVE) (NM_152671) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	PIKFYVE MS Standard C13 and N15-labeled recombinant protein (NP_689884)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC212288
Predicted MW:	50 kDa
Protein Sequence:	>RC212288 representing NM_152671 Red=Cloning site Green=Tags(s)

MATDDKTSPTLDSANDLPRSPTSPSHLTHFKPLTPDQDEPPFKSAYSSFVNLFRFNKERAEGGQGEQQPL
SGSWTSPQLPSRTQSVRSPTPYKKQLNEELQRRSSALGDLRACTYCRKIALSYAHSTDSNSIGEDLNALS
DSACSVSVLDPSEPRTYPVGRKASRNIFLEDDLAWQSLIHPDSSNTPLSTRLVSVQEDAGKSPARNRSAS
ITNLSLDRSGSPMVPYSYETSVSPQANRTYVRTETTEDERKILLDSVQLKDLWKKICHSSGMEFQDHRYS
LRTHPNCIVGKELVNWLRNGHIATRAQAIAIGQAMVDGRWLDVSHHDQLFRDEYALYRPLQSTEFSET
PSPDSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDDNLANSASPSKRTSVSSFQSTVSDSAASISL
NVELDNVNFHIKKPSKYPHVPPHPADQKGR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_689884</u>
RefSeq Size:	1661
RefSeq ORF:	1353
Synonyms:	CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29



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Locus ID: 200576

UniProt ID: [Q9Y2I7](#)

Cytogenetics: 2q34

Summary: 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]

Protein Families: Druggable Genome

Protein Pathways: Endocytosis, Fc gamma R-mediated phagocytosis, Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system, Regulation of actin cytoskeleton

Product images:



Coomassie blue staining of purified PIKFYVE protein (Cat# [TP312288]). The protein was produced from HEK293T cells transfected with PIKFYVE cDNA clone (Cat# [RC212288]) using MegaTran 2.0 (Cat# [TT210002]).