

## **Product datasheet for PH312288**

## OriGene Technologies, Inc.

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## 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 **HEK293 Expression Host: Expression cDNA Clone** 

or AA Sequence:

RC212288

Predicted MW: 50 kDa

>RC212288 representing NM\_152671 **Protein Sequence:** 

Red=Cloning site Green=Tags(s)

MATDDKTSPTLDSANDLPRSPTSPSHLTHFKPLTPDQDEPPFKSAYSSFVNLFRFNKERAEGGQGEQQPL SGSWTSPQLPSRTQSVRSPTPYKKQLNEELQRRSSALGDLRACTYCRKIALSYAHSTDSNSIGEDLNALS DSACSVSVLDPSEPRTPVGSRKASRNIFLEDDLAWQSLIHPDSSNTPLSTRLVSVQEDAGKSPARNRSAS ITNLSLDRSGSPMVPSYETSVSPQANRTYVRTETTEDERKILLDSVQLKDLWKKICHHSSGMEFQDHRYW LRTHPNCIVGKELVNWLIRNGHIATRAQAIAIGQAMVDGRWLDCVSHHDQLFRDEYALYRPLQSTEFSET PSPDSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDDNLANSASPSKRTSVSSFQSTVDSDSAASISL

NVELDNVNFHIKKPSKYPHVPPHPADQKGRR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

C-Myc/DDK Tag:

**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- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine

**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3

Store at -80°C. Avoid repeated freeze-thaw cycles. Storage:

Stable for 3 months from receipt of products under proper storage and handling conditions. Stability:

RefSeq: NP 689884

RefSeg Size: 1661 RefSeq ORF: 1353

Synonyms: CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29





**Locus ID:** 200576

UniProt ID: Q9Y2I7

Cytogenetics: 2q34

Summary: Phosphorylated derivatives of phosphatidylinositol (PtdIns) regulate cytoskeletal functions,

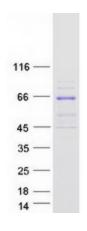
membrane trafficking, and receptor signaling by recruiting protein complexes to cell- and endosomal-membranes. Humans have multiple PtdIns proteins that differ by the degree and position of phosphorylation of the inositol ring. This gene encodes an enzyme (PIKfyve; also known as phosphatidylinositol-3-phosphate 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]).