

Recombinant Full Length Human PIKFYVE Protein, Flag tagged

Cat. No. PIKFYVE-22HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant protein of human phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinase, type III (PIP5K3), transcript variant 3 with Flag tag was expressed in HEK293T.
Species	Human
Source	HEK293T
ProteinLength	1-462 aa
Description	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

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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.

AASequence

MATDDKTSPTLDSANDLPRSPTSPSHLTHFKPLTPDQDEPPFKSAYSSSFVNLFRFNK
ERAEGGQGEQQPLSGSWTSPQLPSRTQSVRSPTYKKQLNEELQRRSSALGDLRA
CTYCRKIALSYAHSTDSNSIGEDLNALSDSACSVSVLDPSEPRTVPVGSRKASRNIFLE
DDLAWQSLIHPDSSNTPLSTRLVSVQEDAGKSPARNRSASITNLSLDRSGSPMVPSY
ETSVSPQANRTYVRTETTEDERKILLDSVQLKDLWKKICHSSGMEFQDHRYWLRT
HPNCIVGKELVNWLRNGHIATRAQAIAIGQAMVDGRWLDCVSHHDQLFRDEYALYR
PLQSTEFSETPSPDSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDDNLANSAS
PSKRTSVSSFQSTVDSDSAASISLNVELDNVNFHIKKPSKYPHVPPHPADQKGRRT
TRPLEQKLISEEDLAANDILDYKDDDDKV

Molecular Mass

50 kDa

Purity

> 80% as determined by SDS-PAGE and Coomassie blue staining

Note

For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

Stability

Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

Storage

Store at -80 centigrade.

Storage Buffer

25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

Concentration

>0.05 µg/µL as determined by microplate BCA method

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Shipping Dry ice

GENE INFORMATION

Gene Name PIKFYVE phosphoinositide kinase, FYVE-type zinc finger containing [Homo sapiens (human)]

Official Symbol PIKFYVE

Synonyms PIKFYVE; phosphoinositide kinase, FYVE-type zinc finger containing; CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29; 1-phosphatidylinositol 3-phosphate 5-kinase; PIPkin-III; epididymis luminal protein 37; phosphatidylinositol 3-phosphate 5-kinase type III; phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinase, type III; phosphoinositide kinase, FYVE finger containing; serine-protein kinase PIKFYVE; type III PIP kinase; zinc finger, FYVE domain containing 29; EC 2.7.1.150; EC 2.7.11.1

Gene ID 200576

mRNA Refseq NM_152671

Protein Refseq NP_689884

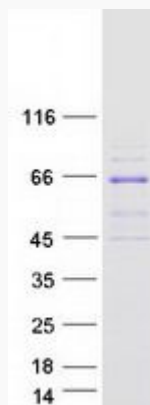
MIM 609414

UniProt ID Q9Y2I7

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SDS-PAGE

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