Recombinant Human PIKFYVE Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. PIKFYVE-1394H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	PIKFYVE MS Standard C13 and N15-labeled recombinant protein (NP_689884) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	Phosphorylated derivatives of phosphatidylinositol (PtdIns) regulate cytoskeletal functi ons, membrane trafficking, and receptor signaling by recruiting protein complexes to c ell- and endosomal-membranes. Humans have multiple PtdIns proteins that differ by t he degree and position of phosphorylation of the inositol ring. This gene encodes an e nzyme (PIKfyve; also known as phosphatidylinositol-3-phosphate 5-kinase type III or PIPKIII) that phosphorylates the D-5 position in PtdIns and phosphatidylinositol-3-pho sphate (PtdIns3P) to make PtdIns5P and PtdIns(3,5)biphosphate. The D-5 position al so can be phosphorylated by type I PtdIns4P-5-kinases (PIP5Ks) that are encoded by distinct genes and preferentially phosphorylate D-4 phosphorylated PtdIns. In contras t, PIKfyve preferentially phosphorylates D-3 phosphorylated PtdIns. In addition to bein g a lipid kinase, PIKfyve also has protein kinase activity. PIKfyve regulates endomem brane homeostasis and plays a role in the biogenesis of endosome carrier vesicles fr om 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 d istended with lipid and mucopolysaccharide filled intracytoplasmic vacuoles. Alternativ

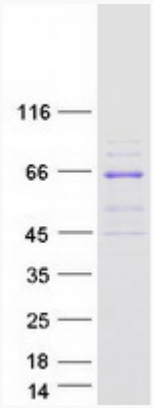
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	e splicing results in multiple transcript variants encoding distinct isoforms.
Molecular Mass	50 kDa
AA Sequence	MATDDKTSPTLDSANDLPRSPTSPSHLTHFKPLTPDQDEPPFKSAYSSFVNLFRFNK ERAEGGQGEQQPLSGSWTSPQLPSRTQSVRSPTPYKKQLNEELQRRSSALGDLRA CTYCRKIALSYAHSTDSNSIGEDLNALSDSACSVSVLDPSEPRTPVGSRKASRNIFLE DDLAWQSLIHPDSSNTPLSTRLVSVQEDAGKSPARNRSASITNLSLDRSGSPMVPSY ETSVSPQANRTYVRTETTEDERKILLDSVQLKDLWKKICHHSSGMEFQDHRYWLRT HPNCIVGKELVNWLIRNGHIATRAQAIAIGQAMVDGRWLDCVSHHDQLFRDEYALYR PLQSTEFSETPSPDSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDDNLANSAS PSKRTSVSSFQSTVDSDSAASISLNVELDNVNFHIKKPSKYPHVPPHPADQKGRRTR TRPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 μg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

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

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Synonyms	PIKFYVE; phosphoinositide kinase, FYVE finger containing; phosphatidylinositol 3 phosphate/phosphatidylinositol 5 kinase, type III, PIP5K3; 1-phosphatidylinositol 3-phosphate 5-kinase; KIAA0981; MGC40423; p235; PIKfyve; PIP5K; PIPkin-III; type III PIP kinase; phosphatidylinositol 3-phosphate 5-kinase; 1-phosphatidylinositol-3-phosphate 5-kinase; phosphatidylinositol 3-phosphate 5-kinase type III; phosphatidylinositol-3-phosphate/phosphatidylinositol 5-kinase, type III; CFD; FAB1; PIP5K3; FLJ37746;
Gene ID	200576
mRNA Refseq	NM_152671
Protein Refseq	NP_689884
MIM	609414
UniProt ID	Q9Y2I7
SDS-PAGE	

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