

Product datasheet for **RC230258**

PIP5K3 (PIKFYVE) (NM_001178000) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PIP5K3 (PIKFYVE) (NM_001178000) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PIP5K3
Synonyms:	CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC230258 representing NM_001178000
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCACAGATGATAAGACGTCCCAACACTGGACTCTGCTAATGATTTGCCTCGATCTCTACTAGTC
 CTCTCATCTCACACTTTAAACCTTTGACTCCTGATCAAGATGAGCCCTTTTAAATCAGCTTATAG
 TTCTTTTGTAATCTCTTTTCGTTTTAACAAAGAGAGAGCAGAAGGAGGCCAGGGAGAACAGCAGCCTTTG
 AGTGGAAGTTGGACCAGCCCTCAGCTCCCTTCGAGGACACAGTCTGTTAGGTACCCACACCTTATAAAA
 AGCAGCTTAATGAGGAACTCCAGCGGCGCTTTCAGCATTAGACACAAGAAGGAAAGCAGAACCTACCTT
 TGGAGGTCATGACCCTCGTACAGCTGTTAGCTTCAAGCCTCAGCACAGTATTAACACGCTCAAGGAA
 ATCATGGAGGGGAAAAGCCAGGATAGTGACCTGAAACAATACTGGATGCCAGATAGCCAATGTAAGAGT
 GCTATGACTGTAGTGAGAAATTTACAACCTTTAGGCGCAGACACCATTGCCGACTATGTGGGCAGATTTT
 CTGCAGTCGTTGCTGTAATCAAGAAATCCCTGGAAAATTTATGGGCTATACAGGAGACCTCCGAGCTTGC
 ACATATTTGTAAGAAAATAGCCTTAAGTTATGCTCATTCCACAGACAGTAATCTATTGGGGAAGACTTGA
 ATGCTCTTTTCAGATTCTGCTTGCTGTGTCTGTGCTTGTCAAGTGAACCCCGAACACCTGTTGGGAG
 TAGGAAAGCCAGCCGTAACATATTTTTAGAGGATGATTTGGCCTGGCAAAGTTTATTTCATCCAGATTCC
 TCAAACTCCTCTTTCAACAAGACTTGTATCTGTGCAAGAGGATGCTGGGAAATCTCCTGCTCGAAATA
 GATCAGCCAGCATTACTAACCTGCTACTGGATAGATCTGGTTCTCCTATGGTACCTTCATATGAGACATC
 TGTCAGTCCCAGGCTAACCGAACATATGTTAGGACAGAGACCACTGAGGATGAACGCAAAATCTTCTG
 GACAGTGTGCAGTTAAAAGACCTGTGGAAAAAATCTGCCATCACAGCAGTGAATGGAGTTTCAGGATC
 ACCGCTACTGGTTGAGAACGCATCCCACTGCTTGTAGGAAAGGAATTAGTCAACTGGCTAATCCGAAA
 TGGGCATATTGCCACAAGGGCACAAAGCTATAGCAATTGGACAAGCAATGGTTGATGGACGTTGGCTGGAT
 TGTGTTAGTCATCACGACCAGCTTTTCAGAGATGAGTATGCGCTGTATAGACCACTGCAGAGTACAGAAT
 TTTCTGAGACGCTTCTCCCGACAGTACTCAGTGAACCTCGTGAAGGACACTCTGAGCCATCCTGGTT
 TAAAGACATAAAGTTTGATGACAGTGCACAGAACAGATAGCTGAAGAAGGTGACGATAATTTGGCTAAT
 TCTGCCAGTCTAGCAAGCGCACATCAGTCAGCAGTTTCCAGTCCACAGTGGACAGTACTCAGCCGCTT
 CTATCAGCCTGAACGTGGAGCTGGACAACGTGAACCTCCATATCAAGAAGCCCTCCAAGTACCCACATGT
 GCCCCCTCACCTGCTGACCAAAAAGGTAGGAGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC230258 representing NM_001178000
 Red=Cloning site Green=Tags(s)

MATDDKTSPTLDSANDLPRSPTSPSHLTHFKLTPDQDEPPFKSAYSSFVNLFRFNKERAEGGQGEQQPL
 SGWTSPLPSRTQSVRSPTPYKKQLNEELQRRSSALDTRRKAEPFEGGHPRTAVQLRSLSTVLKRLKE
 IMEGKSQDSDLKQYWMPDSQCCEYDCSEKFTFRRRHHCRLCGQIFCSRCCNQEIPGKFMGYTGDLRAC
 TYCRKIALSYAHSTDSNSIGEDLNALSDSACSVSVLDPSEPRTPVGSRKASRNIFLEDDLAWQSLIHPDS
 SNTPLSTRLVSVQEDAGKSPARNRSASITNLSLDRSGSPMVPSYETSVPQANRTYVRETETEDERKILL
 DSVQLKDLWKKICHSSGMEFQDHYWLRTHPNCIVGKELVNWLRNGHIATRAQAIAGQAMVDGRWLD
 CVSHHDQLFRDEYALYRPLQSTEFSETPSPSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDNDLAN
 SASPSKRTSVSSFQSTVSDSASAISLNVELDNVNFHIKKPSKYPHVPPHPADQKGRR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8036_g01.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001178000

ORF Size: 1644 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001178000.1](#), [NP_001171471.1](#)

RefSeq ORF: 1647 bp

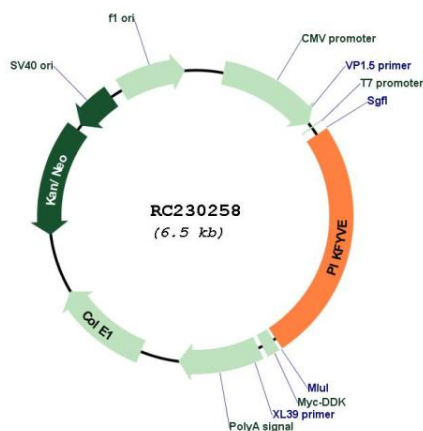
Locus ID: 200576

UniProt ID: [Q9Y2I7](#)

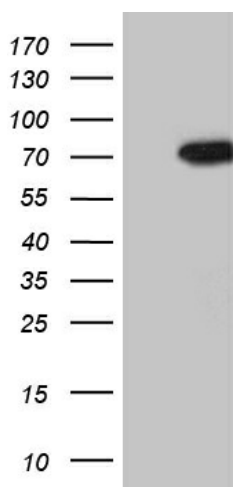
Cytogenetics: 2q34

Protein Families:	Druggable Genome
Protein Pathways:	Endocytosis, Fc gamma R-mediated phagocytosis, Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system, Regulation of actin cytoskeleton
MW:	62 kDa
Gene Summary:	<p>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]</p>

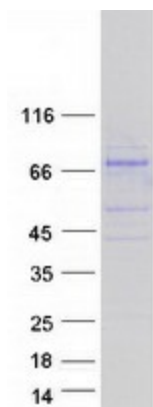
Product images:



Circular map for RC230258



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PIKFYVE (Cat# RC230258, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PIKFYVE (Cat# [TA810374])(1:2000).



Coomassie blue staining of purified PIKFYVE protein (Cat# [TP330258]). The protein was produced from HEK293T cells transfected with PIKFYVE cDNA clone (Cat# RC230258) using MegaTran 2.0 (Cat# [TT210002]).