OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC222618

PIP5K3 (PIKFYVE) (NM_015040) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PIP5K3 (PIKFYVE) (NM_015040) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PIKFYVE
Synonyms:	CFD; FAB1; HEL37; PIP5K; PIP5K3; ZFYVE29
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC222618 representing NM_015040 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCACAGATGATAAGACGTCCCCAACACTGGACTCTGCTAATGATTTGCCTCGATCTCCTACTAGTC
CTTCTCATCTCACACACTTTAAACCTTTGACTCCTGATCAAGATGAGCCCCCTTTTAAATCAGCTTATAG
TTCTTTTGTAAATCTCTTTCGTTTTAACAAAGAGAGAGCAGAAGGAGGCCAGGGAGAACAGCAGCCTTTG
AGTGGAAGTTGGACCAGCCCTCAGCTCCCTTCGAGGACACAGTCTGTTAGGTCACCCACACCTTATAAAA
AGCAGCTTAATGAGGAACTCCAGCGGCGCTCTTCAGCATTAGACACAAGAAGGAAAGCAGAACCTACCTT
TGGAGGTCATGACCCTCGTACAGCTGTTCAGCTTCGAAGCCTCAGCACAGTATTAAAACGCCTCAAGGAA
ATCATGGAGGGGAAAAGCCAGGATAGTGACCTGAAACAATACTGGATGCCAGATAGCCAATGTAAAGAGT
GCTATGACTGTAGTGAGAAATTTACAACCTTTAGGCGCAGACACCATTGCCGACTATGTGGGCAGATTTT
CTGCAGTCGTTGCTGTAATCAAGAAATCCCTGGAAAATTTATGGGCTATACAGGAGACCTCCGAGCTTGC
ACATATTGTAGAAAAATAGCCTTAAGTTATGCTCATTCCACAGACAGTAATTCTATTGGGGAAGACTTGA
ATGCTCTTTCAGATTCTGCTTGCTCTGTGTCTGTGCTTGATCCAAGTGAACCCCGAACACCTGTTGGGAG
TAGGAAAGCCAGCCGTAACATATTTTTAGAGGATGATTTGGCCTGGCAAAGTTTGATTCATCCAGATTCC
TCAAATACTCCTCTTTCAACAAGACTTGTATCTGTGCAAGAGGATGCTGGGAAATCTCCTGCTCGAAATA
GATCAGCCAGCATTACTAACCTGTCACTGGATAGATCTGGTTCTCCTATGGTACCTTCATATGAGACATC
TGTCAGTCCCCAGGCTAACCGAACATATGTTAGGACAGAGACCACTGAGGATGAACGCAAAATTCTTCTG
GACAGTGTGCAGTTAAAAGACCTGTGGAAAAAAATCTGCCATCACAGCAGTGGAATGGAGTTTCAGGATC
ACCGCTACTGGTTGAGAACGCATCCCAACTGCATTGTAGGAAAGGAATTAGTCAACTGGCTAATCCGAAA
TGGGCATATTGCCACAAGGGCACAAGCTATAGCAATTGGACAAGCAATGGTTGATGGACGTTGGCTGGAT
TGTGTTAGTCATCACGACCAGCTTTTCAGAGATGAGTATGCGCTGTATAGACCACTGCAGAGTACAGAAT
TTTCTGAGACGCCTTCTCCCGACAGTGACTCAGTGAACTCCGTGGAAGGACACTCTGAGCCATCCTGGTT
TAAAGACATAAAGTTTGATGACAGTGACACAGAACAGATAGCTGAAGAAGGTGACGATAATTTGGCTAAT
TCTGCCAGTCCTAGCAAGCGCACATCAGTCAGCAGTTTCCAGTCCACAGTGGACAGTGACTCAGCCGCTT

View online »

CTATCAGCCTGAACGTGGAGCTGGACAACGTGAACTTCCATATCAAGAAGCCCTCCAAGTACCCACATGT
GCCCCCTCACCCTGCTGACCAAAAAGAGTATTTGATTTCTGACACTGGAGGACAACAGCTCTCAATAAGT
GACGCTTTCATCAAAGAATCCTTATTTAATCGCCGAGTAGAGGAAAAATCCAAAGAGCTGCCTTTCACAC
CTTTGGGCTGGCATCATAACAACCTGGAGCTCCTGAGGGAGGAGAATGGGGAGAAACAAGCCATGGAGAG
GTTGCTTTCAGCTAATCATAACCACATGATGGCACTACTCCAGCAGTTGCTCCATAGTGACTCACTGTCA
TCATCTTGGAGGGACATCATCGTGTCATTGGTCTGCCAGGTTGTTCAGACAGTCCGACCTGATGTCAAGA
ACCAGGATGATGACATGGATATCCGTCAGTTTGTCCACATCAAAAAAATCCCAGGTGGAAAGAAGTTTGA
TTCTGTGGTTGTCAATGGCTTTGTTTGTACCAAGAACATTGCACATAAAAAGATGAGTTCTTGTATTAAA
AACCCCAAAATTCTTCTGTTGAAGTGTTCCATTGAGTATCTCTACAGAGAAGAAACTAAGTTTACTTGCA
TTGATCCTATTGTGCTTCAGGAAAGGGAATTCTTGAAGAATTATGTCCAGCGAATAGTTGATGTTCGACC
CACCTTGGTTCTTGTTGAGAAAACAGTGTCTCGGATTGCCCAGGACATGTTATTGGAACATGGCATTACT
TTGGTCATTAATGTAAAGTCACAAGTTTTGGAACGAATCAGTCGAATGACCCAAGGTGATTTAGTGATGT
CAATGGACCAGCTGCTTACGAAACCACACCTGGGCACTTGTCACAAATTTTATATGCAGATATTTCAGTT
GCCTAATGAACAAACCAAGACACTGATGTTTTTTGAAGGTTGTCCACAGCACCTAGGCTGTACAATCAAG
CTAAGAGGAGGCTCTGATTATGAGCTGGCTCGAGTTAAGGAGATCCTAATATTTATGATCTGTGTTGCTT
ATCATTCTCAACTAGAAATATCCTTTCTCATGGATGAATTTGCTATGCCTCCCACATTAATGCAAAACCC
TTCATTCCATTCCCTGATTGAGGGACGAGGGCATGAGGGGGCTGTCCAAGAGCAGTACGGTGGAGGTTCC
ATCCCCTGGGATCCTGACATCCCTCCTGAGTCTCTGCCCTGTGATGATAGCAGTTTGCTGGAATTGAGGA
TTGTGTTTGAGAAGGGTGAGCAGGAAAATAAAAATCTTCCGCAGGCTGTTGCCTCTGTGAAGCATCAAGA
ACATAGCACAACAGCTTGCCCGGCGGGTCTCCCTTGTGCTTTCTTTGCACCTGTACCGGAATCATTGTTG
CCACTCCCTGTGGATGACCAACAAGATGCTTTAGGCAGCGAGCAGCCAGAGACTTTGCAGCAAACAGTTG
TGCTGCAGGATCCCAAAAGCCAGATAAGAGCCTTTAGAGACCCTCTACAGGATGACACTGGATTATATGT
TACTGAGGAAGTCACCTCCTCTGAAGATAAACGAAAGACTTATTCTTTGGCCTTTAAGCAGGAATTAAAA
GATGTGATCCTCTGTATCTCCCCAGTAATCACATTCCGAGAACCCTTTCTTTTAACTGAAAAGGGGATGA
GATGCTCTACCCGAGATTATTTTGCAGAGCAGGTTTACTGGTCTCCTCTCCTCAATAAAGAATTCAAAGA
AATGGAGAACAGGAGGAAGAAACAGCTGCTCAGGGATCTCTCTGGACTTCAGGGCATGAATGGAAGTATT
CAGGCCAAGTCTATTCAAGTCTTACCCTCACATGAGCTAGTGAGCACTAGAATTGCTGAGCATCTGGGCG
ATAGCCAGAGCTTGGGTAGAATGCTGGCCGATTATCGAGCCAGAGGAGGAAGAATTCAGCCCAAAAATTC
AGACCCTTTTGCTCATTCAAAGGATGCATCAAGTACTTCAAGTGGCCAATCAGGAAGCAAAAATGAGGGT
GATGAAGAGAGAGGGCTTATTCTGAGTGATGCTGTGTGGTCAACAAAGGTGGACTGTCTGAATCCCATTA
ATCACCAGAGACTTTGTGTGCTCTTCAGCAGCTCTTCTGCCCAGTCCAGCAATGCTCCTAGTGCCTGTGT
CAGTCCTTGGATTGTAACAATGGAATTTTATGGAAAGAATGATCTTACATTAGGAATATTTTTAGAGAGA
TACTGTTTCAGGCCTTCTTATCAGTGTCCAAGCATGTTCTGTGATACCCCCATGGTACATCATATTCGGC
GCTTTGTTCATGGCCAAGGCTGTGTGCAGATAATCCTGAAGGAGTTGGATTCTCCAGTACCTGGATATCA
GCATACAATTCTTACATATTCCTGGTGTAGAATCTGCAAACAGGTAACACCAGTTGTTGCTCTTTCCAAT
GAGTCCTGGTCTATGTCATTTGCAAAATACCTTGAACTTAGGTTTTATGGGCACCAGTATACTCGCAGAG
CCAACGCTGAGCCCTGTGGTCACTCCATCCATCATGATTATCACCAGTATTTCTCCTATAACCAGATGGT
GGCGTCTTTCAGTTATTCTCCCATTCGGCTTCTTGAAGTATGTGTTCCACTCCCCAAAATATTCATTAAG
CGTCAGGCCCCATTAAAAGTGTCCCTTCTTCAGGATCTGAAGGACTTCTTTCAAAAAGTTTCACAGGTAT
ATGTTGCCATTGATGAAAGACTTGCATCTTTGAAAACTGATACATTTAGTAAAACAAGAGAGGAAAAAAT
GGAAGATATTTTTGCACAGAAAGAGATGGAAGAAGGTGAGTTCAAGAACTGGATTGAGAAGATGCAAGCA
AGGCTCATGTCTTCCTCTGTAGATACCCCTCAGCAACTGCAGTCGGTCTTTGAGTCACTCATTGCCAAGA
AACAAAGTCTCTGTGAAGTGCTGCAAGCTTGGAATAACAGGTTGCAGGACCTTTTCCAACAGGAAAAGGG
TAGAAAGAGACCTTCAGTTCCTCCAAGTCCTGGAAGACTGAGACAAGGGGAAGAAAGCAAGATAAGTGCG
ATGGATGCATCTCCACGGAATATTTCTCCAGGACTTCAGAATGGAGAAAAAGAGGATCGCTTCTTAACAA
CTTTGTCCAGCCAGAGCTCCACCAGTTCTACTCATCTCCAATTGCCTACGCCACCTGAAGTCATGTCTGA
ACAGTCAGTGGGAGGGCCCCCTGAGCTAGATACAGCCAGCAGTTCCGAAGATGTGTTTGATGGGCATTTG
CTGGGATCCACAGACAGCCAAGTGAAGGAAAAGTCAACCATGAAAGCCATCTTTGCAAATTTGCTTCCAG
GAAATAGCTATAATCCTATTCCATTTCCTTTTGATCCAGATAAACACTACTTAATGTATGAACATGAACG
AGTGCCCATTGCAGTCTGCGAGAAGGAACCCAGCTCCATCATTGCTTTTGCTCTCAGTTGTAAAGAATAC
CGAAATGCCTTAGAGGAATTGTCTAAAGCGACTCAGTGGAACAGTGCCGAAGAAGGGCTTCCAACAAATA
GTACTTCAGATAGCAGACCAAAGAGTAGCAGCCCTATCAGATTACCTGAAATGAGTGGAGGACAGACAAA

TCGTACAACAGAAACAGAACCACAACCAACCAAAAAGGCTTCTGGAATGTTGTCCTTCTTCAGAGGGACA
GCAGGGAAAAGCCCCGATCTCTCTTCCCAGAAGAGAGAGACCTTACGTGGAGCAGATAGTGCTTACTACC
AGGTTGGGCAGACGGGCAAGGAGGGGACCGAGAATCAAGGCGTTGAGCCTCAAGATGAAGTAGATGGAGG
AGATACACAAAAGAAGCAACTCATAAATCCTCATGTGGAACTTCAATTTTCAGATGCTAATGCCAAGTTT
TACTGTCGGCTCTACTATGCGGGAGAGTTTCATAAGATGCGTGAAGTGATTCTGGACAGCAGTGAAGAAG
ATTTCATTCGTTCCCTCTCCCACTCATCACCCTGGCAGGCCCGGGGAGGCAAATCAGGAGCTGCCTTCTA
TGCAACTGAGGATGATAGATTTATTTTGAAGCAAATGCCTCGTCTGGAAGTCCAGTCCTTCCTCGACTTT
GCACCACATTACTTCAATTATATTACAAATGCTGTTCAACAAAAGAGGCCCACGGCGTTGGCCAAAATTC
TTGGAGTTTACAGAATTGGTTATAAGAACTCTCAGAACAACACTGAGAAGAAGTTAGATCTCCTTGTCAT
GGAAAATCTTTTCTACGGGAGAAAGATGGCACAGGTTTTTGATTTGAAGGGCTCTCTTAGGAATCGGAAT
GTAAAAACTGACACTGGAAAAGAGAGTTGTGATGTGGTCCTGCTAGATGAAAATCTCCTAAAGATGGTTC
GAGACAACCCTCTATATATTCGTTCTCATTCCAAAGCTGTGCTGAGAACCTCGATCCATAGTGACTCCCA
TTTCCTTTCTAGCCACCTCATTATAGATTATTCTTTGCTGGTTGGGCGAGATGATACTAGCAATGAGCTA
GTAGTTGGAATTATAGATTATATTCGAACATTTACATGGGACAAAAAGCTTGAGATGGTTGTGAAATCAA
CAGGAATTTTAGGTGGACAAGGTAAAATGCCAACAGTGGTGTCTCCGGAGTTGTACAGGACTAGGTTTTG
TGAGGCAATGGACAAGTATTTCCTAATGGTACCAGACCACTGGACAGGCTTGGGTCTGAATTGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

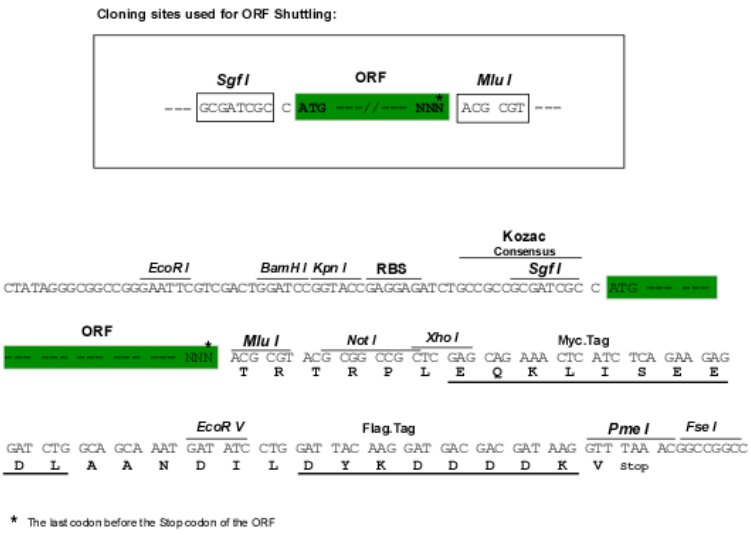
>RC222618 representing NM_015040
Red=Cloning site Green=Tags(s)

MATDDKTSPTLDSANDLPRSPTSPSHLTHFKPLTPDQDEPPFKSAYSSFVNLFRFNKERAEGGQGEQQPL
SGSWTSPQLPSRTQSVRSPTPYKKQLNEELQRRSSALDTRRKAEPTFGGHDPRTAVQLRSLSTVLKRLKE
IMEGKSQDSDLKQYWMPDSQCKECYDCSEKFTTFRRRHHCRLCGQIFCSRCCNQEIPGKFMGYTGDLRAC
TYCRKIALSYAHSTDSNSIGEDLNALSDSACSVSVLDPSEPRTPVGSRKASRNIFLEDDLAWQSLIHPDS
SNTPLSTRLVSVQEDAGKSPARNRSASITNLSLDRSGSPMVPSYETSVSPQANRTYVRTETTEDERKILL
DSVQLKDLWKKICHHSSGMEFQDHRYWLRTHPNCIVGKELVNWLIRNGHIATRAQAIAIGQAMVDGRWLD
CVSHHDQLFRDEYALYRPLQSTEFSETPSPDSDSVNSVEGHSEPSWFKDIKFDDSDTEQIAEEGDDNLAN
SASPSKRTSVSSFQSTVDSDSAASISLNVELDNVNFHIKKPSKYPHVPPHPADQKEYLISDTGGQQLSIS
DAFIKESLFNRRVEEKSKELPFTPLGWHHNNLELLREENGEKQAMERLLSANHNHMMALLQQLLHSDSLS
SSWRDIIVSLVCQVVQTVRPDVKNQDDDMDIRQFVHIKKIPGGKKFDSVVVNGFVCTKNIAHKKMSSCIK
NPKILLLKCSIEYLYREETKFTCIDPIVLQEREFLKNYVQRIVDVRPTLVLVEKTVSRIAQDMLLEHGIT
LVINVKSQVLERISRMTQGDLVMSMDQLLTKPHLGTCHKFYMQIFQLPNEQTKTLMFFEGCPQHLGCTIK
LRGGSDYELARVKEILIFMICVAYHSQLEISFLMDEFAMPPTLMQNPSFHSLIEGRGHEGAVQEQYGGGS
IPWDPDIPPESLPCDDSSLLELRIVFEKGEQENKNLPQAVASVKHQEHSTTACPAGLPCAFFAPVPESLL
PLPVDDQQDALGSEQPETLQQTVVLQDPKSQIRAFRDPLQDDTGLYVTEEVTSSEDKRKTYSLAFKQELK
DVILCISPVITFREPFLLTEKGMRCSTRDYFAEQVYWSPLLNKEFKEMENRRKKQLLRDLSGLQGMNGSI
QAKSIQVLPSHELVSTRIAEHLGDSQSLGRMLADYRARGGRIQPKNSDPFAHSKDASSTSSGQSGSKNEG
DEERGLILSDAVWSTKVDCLNPINHQRLCVLFSSSSAQSSNAPSACVSPWIVTMEFYGKNDLTLGIFLER
YCFRPSYQCPSMFCDTPMVHHIRRFVHGQGCVQIILKELDSPVPGYQHTILTYSWCRICKQVTPVVALSN
ESWSMSFAKYLELRFYGHQYTRRANAEPCGHSIHHDYHQYFSYNQMVASFSYSPIRLLEVCVPLPKIFIK
RQAPLKVSLLQDLKDFFQKVSQVYVAIDERLASLKTDTFSKTREEKMEDIFAQKEMEEGEFKNWIEKMQA
RLMSSSVDTPQQLQSVFESLIAKKQSLCEVLQAWNNRLQDLFQQEKGRKRPSVPPSPGRLRQGEESKISA
MDASPRNISPGLQNGEKEDRFLTTLSSQSSTSSTHLQLPTPPEVMSEQSVGGPPELDTASSSEDVFDGHL
LGSTDSQVKEKSTMKAIFANLLPGNSYNPIPFPFDPDKHYLMYEHERVPIAVCEKEPSSIIAFALSCKEY
RNALEELSKATQWNSAEEGLPTNSTSDSRPKSSSPIRLPEMSGGQTNRTTETEPQPTKKASGMLSFFRGT
AGKSPDLSSQKRETLRGADSAYYQVGQTGKEGTENQGVEPQDEVDGGDTQKKQLINPHVELQFSDANAKF
YCRLYYAGEFHKMREVILDSSEEDFIRSLSHSSPWQARGGKSGAAFYATEDDRFILKQMPRLEVQSFLDF
APHYFNYITNAVQQKRPTALAKILGVYRIGYKNSQNNTEKKLDLLVMENLFYGRKMAQVFDLKGSLRNRN
VKTDTGKESCDVVLLDENLLKMVRDNPLYIRSHSKAVLRTSIHSDSHFLSSHLIIDYSLLVGRDDTSNEL
VVGIIDYIRTFTWDKKLEMVVKSTGILGGQGKMPTVVSPELYRTRFCEAMDKYFLMVPDHWTGLGLNC

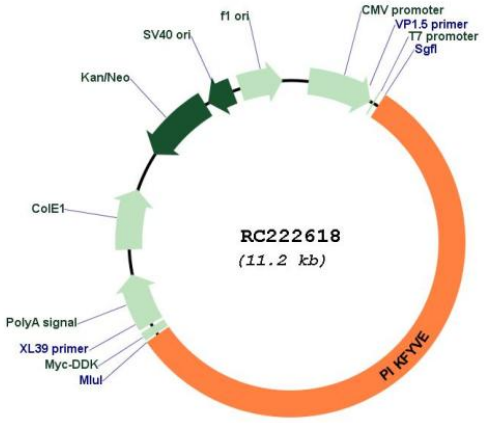
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_015040
ORF Size:	6294 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_015040.4
RefSeq Size:	9901 bp
RefSeq ORF:	6297 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:	237.1 kDa
Gene 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]