

Product datasheet for **SC215979**

PIP5K1 alpha (PIP5K1A) (NM_001135638) Human 3' UTR Clone

Product data:

Product Type:	3' UTR Clones
Product Name:	PIP5K1 alpha (PIP5K1A) (NM_001135638) Human 3' UTR Clone
Vector:	pMirTarget (PS100062)
Symbol:	PIP5K1A
ACCN:	NM_001135638
Insert Size:	1696 bp



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Insert Sequence: >SC215979 3'UTR clone of NM_001135638
 The sequence shown below is from the reference sequence of NM_001135638. The complete sequence of this clone may contain minor differences, such as SNPs.
 Blue=Stop Codon Red=Cloning site

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GGCAAGTTGGACGCCCGCAAGATCCGCGAGATTCTCATTAAAGCCAAGAAGGGCGGAAAGATCGCCGTG
TAACAATTGGCAGAGCTCAGAATTCAAGCGATCGCC
GAAGTTGCAGAGTCAGAGTTCACCCATTAAAGCGCAAAGCCTCAGAAGACCTGGAACAAGATTCTGCCAT
CTCTGTGATCCCAAGATGTCAGCCCTTGCCCGAGCAATGCTGAATTTTCTTCTACTTGGTCATCAAAAA
AGGAGTGAATAGAAAGTGAGGGGAGCTGCTCCTCCATCTTCTTCTGAAGAAGAACCCTTCTCCTTCC
TCTTCTCATGAATGGGCCTTAGTGCCTCAGAGAGTTGAGGACCGCAGCATCCCCCTCCACTCCAGAGTT
GGGTGGTATGGATTTTCAACTGGCCAACCCTTGCCTCCACTATTGAATTTTTTTCAGACCCCCATTCT
TCATGCTGAAAATGGGATTGCTGGACTTGGCAGCTTCTTCCCTCGTCTTTGACTAGGAACCGGACT
CTTAATTTCTCAGGACAGACTAGCTGGCACATTATCCCTACCTTAGTCTTTCTCTGACTCCTGGA
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CTCTTTTTTTTTTCTGAAAAAAGGAAAAAGCACACAGCACACAATTTCAAGCCATTTTCAGATCAGA
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AAGAGTAGTGATTGCTCTGCCAGAAGCAGCTCCTCTTAAACTCCTCCTCTTGTATGAATTTCTTAAG
GCTGAAGGAATGAAGAGAGTGGGACATGGGGTAATCTTTATCCCTTTTGTAAAACAGGAGGCAGCCAT
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ATTCTTGCTATTTTTTTTTCATAATTTACTATTTATGATGATTTAAGTGTTTTATAAGGACAGAGTT
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TTTATTAAGTGTACTATTTGCCTCTACTTTGTATTGTTTCAGAAATGGCAAATACAATATAAAGTGAT
ATATGGTTTTAATGTAATAAACTTTAATGAGTTATTTAGA
ACGCGTAAAGCGCCGCGCATCTAGATTGAAAGAAAATGACCGACCAAGCGACGCCAACCTGCCATCA
CGAGATTCGATTCCACCGCCGCTTCTATGAAAGG
  
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Restriction Sites: Sgfl-MluI

OTI Disclaimer: Our molecular clone sequence data has been matched to the sequence identifier above as a point of reference. Note that the complete sequence of this clone is largely the same as the reference sequence but may contain minor differences, e.g., single nucleotide polymorphisms (SNPs).

Components: The cDNA clone is shipped in a 2-D bar-coded Matrix tube as 10 ug dried plasmid DNA. The package also includes 100 pmols of both the corresponding 5' and 3' vector primers in separate vials.

RefSeq: [NM_001135638.2](https://www.ncbi.nlm.nih.gov/nuccore/NM_001135638.2)

Summary:

Catalyzes the phosphorylation of phosphatidylinositol 4-phosphate (PtdIns4P) to form phosphatidylinositol 4,5-bisphosphate (PtdIns(4,5)P₂). PtdIns(4,5)P₂ is involved in a variety of cellular processes and is the substrate to form phosphatidylinositol 3,4,5-trisphosphate (PtdIns(3,4,5)P₃), another second messenger. The majority of PtdIns(4,5)P₂ is thought to occur via type I phosphatidylinositol 4-phosphate 5-kinases given the abundance of PtdIns4P. Participates in a variety of cellular processes such as actin cytoskeleton organization, cell adhesion, migration and phagocytosis. Required for membrane ruffling formation, actin organization and focal adhesion formation during directional cell migration by controlling integrin-induced translocation of RAC1 to the plasma membrane. Together with PIP5K1C is required for phagocytosis, but they regulate different types of actin remodeling at sequential steps. Promotes particle ingestion by activating WAS that induces Arp2/3 dependent actin polymerization at the nascent phagocytic cup. Together with PIP5K1B is required after stimulation of G-protein coupled receptors for stable platelet adhesion. Plays a role during calcium-induced keratinocyte differentiation. Recruited to the plasma membrane by the E-cadherin/beta-catenin complex where it provides the substrate PtdIns(4,5)P₂ for the production of PtdIns(3,4,5)P₃, diacylglycerol and inositol 1,4,5-trisphosphate that mobilize internal calcium and drive keratinocyte differentiation. Together with PIP5K1C have a role during embryogenesis. Functions also in the nucleus where acts as an activator of TUT1 adenylyltransferase activity in nuclear speckles, thereby regulating mRNA polyadenylation of a select set of mRNAs (PubMed:18288197, PubMed:19158393, PubMed:20660631). Positively regulates insulin-induced translocation of SLC2A4 to the cell membrane in adipocytes (By similarity).[UniProtKB/Swiss-Prot Function]

Locus ID:

8394

MW:

63.2