

Product datasheet for **MR230507**

Pip5k1c (NM_001293647) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pip5k1c (NM_001293647) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pip5k1c
Synonyms:	A1115456; A1835305; Pip5klgamma
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR230507 representing NM_001293647
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAGGACTTCTACGTGGTGGAGAGCATCTTCTCCCCAGTGAAGGGAGCAACCTCACCCCTGCCACC
 ACTTCCAGGATTTCCGCTTCAAGACCTATGCACCTGTTGCCTTCCGCTACTTCCGGGAGCTCTTTGGCAT
 CCGTCCAGATGACTATTTGTACTCCCTGTGCAATGAGCCACTCATCGAGCTCTCCAAACCCGGGGCCAGC
 GGCTCTGTCTTCTACGTACCAGCGACGACGAGTTCATCATCAAGACTGTCATGCACAAGGAGGCAGAGT
 TCCTGCAGAAGCTGCTGCCTGGCTACTACATGAATCTCAACCAGAACCCACGGACGCTGCTGCCAAGTT
 CTATGGGTGTAAGTTCGACCTCAAGGGCTCCACGTACAAGCGCAGGGCCAGCAAGAAGG
 CGTGTCTGCAAAATGCACCTTAAGTTCGACCTCAAGGGCTCCACGTACAAGCGCAGGGCCAGCAAGAAGG
 AGAAGGAGAAGAGCCTGCCACCTACAAGGACCTGGACTTCATGCAGGACATGCCCGAGGGGCTGCTGCT
 GGACTCCGACACCTTTGGCGCCCTGGTCAAGACGCTGCAGCGAGACTGCCTGGTGTGGAGAGCTTCAAG
 ATAATGGACTACAGCCTGCTGCTGGGCGTGCACAACATCGATCAGCAGGAGCGAGAGCGCCAGGCCGAGG
 GCGCCAGAGCAAGGCGGATGAGAAGCGGCCCGTGGCCAGAAGGCTCTGTATTCCACGGCCATGGAGTC
 TATCCAGGGCGGAGCTGCCCGTGGGGAGGCCATTGAGACAGATGACACGATGGGTGGGATTCCAGCAGTG
 AATGGGCGCGGGAGCGACTGCTCCTCCACATCGGGATCATTGATATTCTGCAGTCTACAGGTTTATCA
 AGAAGTTAGAACACACCTGGAAGGCCCTCGTCCATGATGGGGACTGTCTCAGTCCACCGGCCAGCTT
 CTATGCAGAGCGCTTCTCAAGTTCATGAGCAGCACGGTGTCCGGAAGAGTTCTCCCTGAAGTCTCT
 CCATCCAAGAAAGGACGTGGTGCCTGCTGGCGGTCAAACCCCTGGGGCCACTGCTGCCTTCTCAGCCA
 GCCAGATCCCCAGCGAGAGAGAGGATGTGCAGTATGACCTGCGGGGGGCCCGAGTACCCACAGCTTGA
 GGATGAAGGCGCGCCTGACCTCCTGCCCTGCACCCACCGTCTTTGAGGAAGCCACCACAGCCTCCATC
 GCCACCACCTGTCTCCACCTCCTCTCCATCCAGAGCGGTCCCTTTCAGATACATCGGAGCAGCCCC
 GGTACAGGCGGCGCACGAGTCTTACAGCCAGGATGGCCGGCCCCAGGAGGAGCCCCATGCGGAAGACCT
 GCAGAAGATAACTGTGCAGGTGGAGCCAGTGTGCGGTGTGGGGTTGTCCCAAGGAGGAGGGTGCAGGA
 GTGGAGGTCCCCCATGTGGGCATCGGCTGCAGCCTCTGTGAAATAGACGCTGCCAGCCAGGCCCTCAG
 AGCCTGCCAGCCAGGCCATGAGGAGGATGCACCTCTACAGACATCTATTTCCACCGACGAGAG
 GAGCTGGTGTACTCCCCGCTTCACTATAGCGCGCGGCCCGCTCCGACGGCGAGAGCGACACA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230507 representing NM_001293647
 Red=Cloning site Green=Tags(s)

MQDFYVVESIFFPSEGSNLTPAHHFQDFRKYAPVAFRYFRELFGIRPDDYLYSLCNEPLIELSNPGAS
 GSVFYVTSDEFIIKTVMHKEAEFLQKLLPGYYMNLNQNPRLLPKFYGLYCVQSGGKNIRVVVMNNVLP
 RVVKMHLKFDLKGSTYKRRASKKEKESLPTYKDLDFMQDMEGLLLDSDTFGALVKTQRDCLVLESFK
 IMDYSLLLGVHNIDQQERERQAEGAQSKADEKRPVAQKALYSTAMESIQGGAARGEAIETDDTMGGIPAV
 NGRGERLLLHIGIIDILQSYRFIKKLEHTWKALVHDGDTVSVHRPSFYAERFFKMSSTVFRKSSSLKSS
 PSKKGRGALLAVKPLGPTAAFSASQIPSEREDVQYDLRGARSYPTLEDEGRPDLLPCTPPSFEEATTASI
 ATTLSSLSIPERSPDTSEQPRYRRRTQSSGQDGRPQEEDLQKITVQVEPVCVGVVVPKEEGAG
 VEVPPCGASAAASVEIDAASQASEPASQASDEEDAPSTDIFYPTDERSWVYSPLHYSARPASDGESDT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

ACCN:	NM_001293647
ORF Size:	1674 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:	<ol style="list-style-type: none">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_001293647.1 , NP_001280576.1
RefSeq Size:	4313 bp
RefSeq ORF:	1677 bp
Locus ID:	18717
UniProt ID:	O70161
Cytogenetics:	10 C1
MW:	62.5 kDa

Gene 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 vesicle mediated transport, cell adhesion, cell polarization and cell migration. Together with PIP5K1A is required for phagocytosis, but they regulate different types of actin remodeling at sequential steps. Promotes particle attachment by generating the pool of PtdIns(4,5)P₂ that induces controlled actin depolymerization to facilitate Fc-gamma-R clustering. Mediates RAC1-dependent reorganization of actin filaments. Required for synaptic vesicle transport. Controls the plasma membrane pool of PtdIns(4,5)P₂ implicated in synaptic vesicle endocytosis and exocytosis. Plays a role in endocytosis mediated by clathrin and AP-2 (adaptor protein complex 2). Required for clathrin-coated pits assembly at the synapse. Participates in cell junction assembly. Modulates adherens junctions formation by facilitating CDH1 trafficking. Required for focal adhesion dynamics. Modulates the targeting of talins (TLN1 and TLN2) to the plasma membrane and their efficient assembly into focal adhesions. Regulates the interaction between talins (TLN1 and TLN2) and beta-integrins. Required for uropodium formation and retraction of the cell rear during directed migration. Has a role in growth factor- stimulated directional cell migration and adhesion. Required for talin assembly into nascent adhesions forming at the leading edge toward the direction of the growth factor. Negative regulator of T-cell activation and adhesion. Negatively regulates integrin alpha-L/beta-2 (LFA-1) polarization and adhesion induced by T-cell receptor. Together with PIP5K1A has a role during embryogenesis and together with PIP5K1B may have a role immediately after birth. [UniProtKB/Swiss-Prot Function]