

Product datasheet for **RN200081**

Pip5k1c (NM_001009967) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pip5k1c (NM_001009967) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Pip5k1c
Synonyms:	MGC124518
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >RN200081 representing NM_001009967
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCTAGAGGTGCCGACGAGGCAGAGAGCGCCAAGCAGGGGCCGTGACAGCGGAGCGCCCTGGT
 CTGCGGAGAGTGGGGCGGCGCAGGTATGACCCAGAAGAAGGCTATCCTTGCAGAGGCCCGTTGGTGAC
 AGGGCAGCCAGGCCCTGGCCATGGGAAGAAGCTGGCCATCGAGGCGTGATGCGTCTGGAGAGACTACG
 TATAAGAAGACCACCTCGTCCACCTGAAGGGTCCATCCAAGTGGGATTGGGTACACGGTGGGCAACC
 TCAGCTCTAAGCCAGAACCGCATGTGCTCATGCAGGACTTCTATGTGGTGGAGAGCATCTTCTTTCCAG
 CGAAGGGAGCAACCTTACCCCGCCACCATTCCAGGATTTCCGTTTCAAGACCTATGCACCTGTTGCC
 TTCGTTACTTCCGGGAGCTCTTGGTATCCGTCGGGACGATTACTTGTACTCACTCTGCAACGAGCCAC
 TCATTGAGCTGTCAACCCGGTGCCAGTGGCTCCGTCTTCTACGTCACCAGCGATGACGAGTTCATCAT
 TAAGACTGTCATGACAAGGAGGCGGAGTTCCTGCAGAACTGCTGCCTGGCTACTATATGAACCTCAAC
 CAGAACCCCGGACCTTGTCTGCCAAGTCTATGGGCTGTACTGTGTGCAGTCCGGCGGCAAGAATTC
 GAGTGGTGGTCAATGAACAATGTGCTGCCCGTGTGCTCAAGATGCACCTCAAGTTCGACCTCAAGGGCTC
 CACGTACAAGCGCAGGGCCAGCAAGAAGGAGAAGGAGAAGAGCCTGCCACCTACAAGGACCTGGACTTC
 ATGCAGGACATGCCAGAGGGGCTGCTACTGGACTCTGACACCTTTGGCGCCCTGGTCAAGACGCTGCAGC
 GAGACTGCCTGGTGTGGAGAGCTTCAAGATAATGGACTACAGCCTGCTGCTGGGTGTGCACAACATTGA
 CCAGCAGGAGCGGGAGCGCCAGGCCGAGGGCGCCAGAGCAAGGCTGACGAGAAGCGGCCGTGGCCAG
 AAGGCCCTCTACTCCACAGCCATGGAGTCCATTCAGGGCGGAGCTGCCCGTGGGGAGGCCATTGAGACAG
 ATGACACGATGGGTGGGATCCCAGCCGTAATGGGCGTGGGGAGCGCTTGCTCTACACATCGGAATCAT
 TGACATTCTGCAGTCTACAGTTTCATCAAGAAGTTAGAACACACCTGGAAGGCCCTCGTCCACGATGGG
 GATACCGTCTCAGTCCACCGGCCAGTTCATGCCGAGCGCTTCTTCAAGTTCATGAGCAGCACGGTCT
 TCCGGAAGAGTTCCTCCCTCAAGTCTCTCCATTAAGAAAGGGCGTGGCGCCCTGCTCGCAGTCAAGCC
 CCTGGGGCCACCAGCAGCTTCTCAGCTAGCCAGATCCCAGTGAAGAGAGAGGATGTGCAGTACGACCTG
 CGGGGGCCCGCAGTACCCACGCTGGAGGATGAAGGCCGGCTGACCTCCTGCCCTGCACCCACCGT
 CCTTTGAGGAAGCCACCACAGCCTCTATGCCACCACCCTGTATCCACCTCCCTCTCCATCCCAGAGCG
 GTCCTTTCAGACACATCAGAGCAGCCCGGTACAGGCGGCGTACGAGTCTTCAAGCCAGGATGGCCGG
 CCCAGGAGGAGTGCATGCGGAAGACCTGCAGAAGATAACTGTGCAGGTGGAGCCAGTGTGTGGTGTGG
 GGGTGTGCTCCCAAGGAGCAGGGTGCAGGAGTGGAGGTTCCCCATCTGGGGCATCGGAGCAGCCAC
 GGTGGAAGTAGACGCTGCCAGCCAGGCCTCAGAGCCCGCCAGCCAAGCCTCTGATGAGGAAGATGCGCT
 TCCACAGACATCTATTTTTTCGCCACGGGAGATACTGGCTTTTCTCTCCCGTGTGCGGACTGCGGG
 CCGTGACACCAAGCCACAGGGCTCCACCCGACGAGAGGAGCTGGGTGTACTCCCGCTTCACTATAG
 CGCACGGCCCGCTCCGACGGCGAGAGCGACACA**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001009967
- Insert Size:** 2067 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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:	<u>NM_001009967.2</u> , <u>NP_001009967.2</u>
RefSeq Size:	4343 bp
RefSeq ORF:	2067 bp
Locus ID:	314641
UniProt ID:	<u>Q5I6B8</u>
Cytogenetics:	7q11
Gene Summary:	<p>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 (By similarity).[UniProtKB/Swiss-Prot Function]</p>