

Datasheet for ABIN7554964

PIP5K1C Protein (AA 1-668) (His tag)



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Overview

Quantity:	1 mg
Target:	PIP5K1C
Protein Characteristics:	AA 1-668
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIP5K1C protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat PIP5K1C Protein expressed in mammalian cells.
Sequence:	<p>MELEVPDEAE SAEAGAVPSE AAWAAESGAA AGLAQKKAAP TEVLSMTAQP GPGHGKKLGH</p> <p>RGVDASGETT YKKTTSSTLK GAIQLGIGYT VGHLSKPER DVLMQDFYVV ESIFFPSEGS</p> <p>NLTPAHHFQD FRFKTYAPVA FRYFRELFGL RPDDYLYSLC NEPLIELSNP GASGSLFYVT</p> <p>SDDEFIIKTV MHKEAEFLQK LLPGYMNLN QNPRTLTPKF YGLYCVQSGG KNIRVVMNN</p> <p>ILPRVVKMHL KFDLKGSTYK RRASKKEKEK SFPTYKDLDF MQDMPEGLLL DADTF SALVK</p> <p>TLQRDCLVLE SFKIMDYSLL LGVHNIDQHE RERQAQGAQS TSDEKRPVGQ KALYSTAMES</p> <p>IQGGAARGEA IESDDTMGGI PAVNGRGERL LLHIGIIDIL QSYRFIKKLE HTWKALVHDG</p> <p>DTVSVHRPSF YAEFFKFMS NTVFRKNSSL KSSPSKKGRG GALLAVKPLG PTAAFSASQI</p> <p>PSEREEAQYD LRARSYPTL EDEGRPDLLP CTPPSFEEAT TASIATTLSS TSLSIPERSP</p> <p>SETSEQPRYR RRTQSSGQDG RPQEEPPAEE DLQQITVQVE PACSVEIVVP KEEDAGVEAS</p> <p>PAGASAAVEV ETASQASDEE GAPASQASDE EDAPATDIYF PTDESWVYS PLHYSAQAPP</p>

ASDGESDT **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

Grade:

custom-made

Target Details

Target:

PIP5K1C

Alternative Name:

PIP5K1C ([PIP5K1C Products](#))

Background:

Phosphatidylinositol 4-phosphate 5-kinase type-1 gamma (PIP5K1gamma) (PtdIns(4)P-5-kinase 1 gamma) (EC 2.7.1.68) (Type I phosphatidylinositol 4-phosphate 5-kinase gamma), FUNCTION: Catalyzes the phosphorylation of phosphatidylinositol 4-phosphate (PtdIns(4)P/PI4P) to form phosphatidylinositol 4,5-bisphosphate (PtdIns(4,5)P2/PIP2), a lipid second messenger that regulates several cellular processes such as signal transduction, vesicle trafficking, actin cytoskeleton dynamics, cell adhesion, and cell motility (PubMed:12422219, PubMed:22942276). PtdIns(4,5)P2 can directly act as a second messenger or can be utilized as a precursor to generate other second messengers: inositol 1,4,5-trisphosphate (IP3), diacylglycerol (DAG) or phosphatidylinositol-3,4,5-trisphosphate (PtdIns(3,4,5)P3/PIP3) (Probable). PIP5K1A-mediated phosphorylation of PtdIns(4)P is the

Target Details

predominant pathway for PtdIns(4,5)P₂ synthesis (By similarity). Together with PIP5K1A, is required for phagocytosis, both enzymes regulating different types of actin remodeling at sequential steps (By similarity). 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 (By similarity). Controls the plasma membrane pool of PtdIns(4,5)P₂ implicated in synaptic vesicle endocytosis and exocytosis (PubMed:12847086). Plays a role in endocytosis mediated by clathrin and AP-2 (adaptor protein complex 2) (PubMed:12847086). Required for clathrin-coated pits assembly at the synapse (PubMed:17261850). Participates in cell junction assembly (PubMed:17261850). Modulates adherens junctions formation by facilitating CDH1/cadherin trafficking (PubMed:17261850). Required for focal adhesion dynamics. Modulates the targeting of talins (TLN1 and TLN2) to the plasma membrane and their efficient assembly into focal adhesions (PubMed:12422219). Regulates the interaction between talins (TLN1 and TLN2) and beta-integrins (PubMed:12422219). Required for uropodium formation and retraction of the cell rear during directed migration (By similarity). Has a role in growth factor-stimulated directional cell migration and adhesion (By similarity). Required for talin assembly into nascent adhesions forming at the leading edge toward the direction of the growth factor (PubMed:17635937). Negative regulator of T-cell activation and adhesion (By similarity). Negatively regulates integrin alpha-L/beta-2 (LFA-1) polarization and adhesion induced by T-cell receptor (By similarity). Together with PIP5K1A has a role during embryogenesis and together with PIP5K1B may have a role immediately after birth (By similarity). {ECO:0000250|UniProtKB:O70161, ECO:0000250|UniProtKB:P70182, ECO:0000269|PubMed:12422219, ECO:0000269|PubMed:12847086, ECO:0000269|PubMed:17261850, ECO:0000269|PubMed:17635937, ECO:0000269|PubMed:22942276, ECO:0000305|PubMed:19889969}.

Molecular Weight:	73.3 kDa
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UniProt:	O60331
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Pathways:	PI3K-Akt Signaling , Inositol Metabolic Process , Cell-Cell Junction Organization , Maintenance of Protein Location , Synaptic Vesicle Exocytosis
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Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
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Application Details

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months