

Product datasheet for **TA362300**

PIP5K1 alpha (PIP5K1A) Rabbit Polyclonal Antibody

Product data:

| | |
|-------------------------|---|
| Product Type: | Primary Antibodies |
| Applications: | WB |
| Reactivity: | Human |
| Host: | Rabbit |
| Clonality: | Polyclonal |
| Immunogen: | The immunogen is a synthetic peptide directed towards the middle region of human PIP5K1A |
| Specificity: | Expected reactivity: Human |
| Formulation: | Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose. <i>Note that this product is shipped as lyophilized powder to China customers.</i> |
| Concentration: | lot specific |
| Purification: | Affinity purified |
| Conjugation: | Unconjugated |
| Storage: | For short term use, store at 2-8°C up to 1 week. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Stability: | Shelf life: one year from despatch. |
| Predicted Protein Size: | 61 kDa |
| Gene Name: | phosphatidylinositol-4-phosphate 5-kinase type 1 alpha |
| Database Link: | NP_001129108.1 Entrez Gene 8394 Human Q99755 |



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Background:

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.

Synonyms:

PIP5K1alpha

Protein Families:

Druggable Genome

Protein Pathways:

Endocytosis, Fc gamma R-mediated phagocytosis, Inositol phosphate metabolism, Metabolic pathways, Phosphatidylinositol signaling system, Regulation of actin cytoskeleton

Product images:

Host: Rabbit
Target Name: PIP5K1A
Sample Type: U937 Cell Lysate
Antibody Dilution: 1.0µg/ml

Host: Rabbit
Target Name: PIP5K1A
Sample Tissue: Human U937 Whole Cell lysates
Antibody Dilution: 1 µg/ml