

# PIP5K1B Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8038A

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">O14986</a>
<b>Other Accession</b>	<a href="#">Q92749</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	61036
<b>Antigen Region</b>	1-30

## Additional Information

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<b>Gene ID</b>	8395
<b>Other Names</b>	Phosphatidylinositol 4-phosphate 5-kinase type-1 beta, PIP5K1-beta, PtdIns(4)P-5-kinase 1 beta, Phosphatidylinositol 4-phosphate 5-kinase type I beta, PIP5KIbeta, Protein STM-7, Type I phosphatidylinositol 4-phosphate 5-kinase beta, PIP5K1B, STM7
<b>Target/Specificity</b>	This PIP5K1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human PIP5K1B.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	PIP5K1B Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	PIP5K1B ( <a href="#">HGNC:8995</a> )
<b>Function</b>	Catalyzes the phosphorylation of phosphatidylinositol 4- phosphate (PtdIns(4)P/PI4P) to form phosphatidylinositol 4,5- biphosphate

(PtdIns(4,5)P<sub>2</sub>/PIP<sub>2</sub>), a lipid second messenger that regulates several cellular processes such as signal transduction, vesicle trafficking, actin cytoskeleton dynamics, cell adhesion, and cell motility (By similarity). PtdIns(4,5)P<sub>2</sub> can directly act as a second messenger or can be utilized as a precursor to generate other second messengers: inositol 1,4,5-trisphosphate (IP<sub>3</sub>), diacylglycerol (DAG) or phosphatidylinositol-3,4,5-trisphosphate (PtdIns(3,4,5)P<sub>3</sub>/PIP<sub>3</sub>) (By similarity). Mediates RAC1-dependent reorganization of actin filaments. Contributes to the activation of phospholipase PLD2. Together with PIP5K1A, is required, after stimulation by G-protein coupled receptors, for the synthesis of IP<sub>3</sub> that will induce stable platelet adhesion (By similarity).

#### Cellular Location

Cytoplasm, cytosol {ECO:0000250|UniProtKB:P70181}. Cell membrane {ECO:0000250|UniProtKB:P70181}. Endomembrane system. Note=Associated with membranes.

#### Tissue Location

Detected in heart, pancreas, brain, kidney, skeletal muscle and lung.

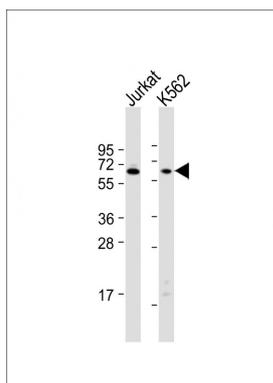
## Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains.

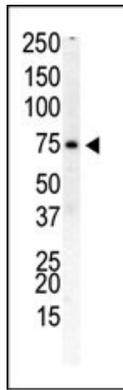
## References

- Blume-Jensen P, et al. Nature 2001. 411: 355.  
Cantrell D, J. Cell Sci. 2001. 114: 1439.  
Jhiang S Oncogene 2000. 19: 5590.  
Manning G, et al. Science 2002. 298: 1912.  
Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359.  
Robertson, S. et al. Trends Genet. 2000. 16: 368.  
Robinson D, et al. Oncogene 2000. 19: 5548.  
Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889.  
Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561.  
Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.

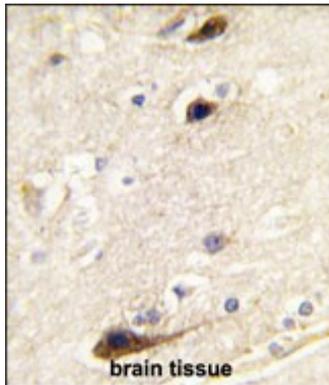
## Images



All lanes : Anti-PIP5K1B Antibody (M1) at 1:1000 dilution  
Lane 1: Jurkat whole cell lysate Lane 2: K562 whole cell lysate  
Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of anti-PIP5K1B Pab (Cat. #AP8038a) in human placenta cell lysate. PIP5K1B (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human brain tissue reacted with PIP5K1B antibody (N-term) (Cat.# AP8038a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

## Citations

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- [Regulation of conformer-specific activation of the integrin LFA-1 by a chemokine-triggered Rho signaling module.](#)
- [Regulation of phosphatidylinositol kinases and metabolism by Wnt3a and Dvl.](#)

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