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PIP5K2B Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8042b

Product Information

Application	WB, IHC-P, E
Primary Accession	P78356
Other Accession	NP_003550
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	47378
Antigen Region	286-317

Additional Information

Gene ID	8396
Other Names	Phosphatidylinositol 5-phosphate 4-kinase type-2 beta, 1-phosphatidylinositol 5-phosphate 4-kinase 2-beta, Diphosphoinositide kinase 2-beta, Phosphatidylinositol 5-phosphate 4-kinase type II beta, PI(5)P 4-kinase type II beta, PIP4KII-beta, PtdIns(5)P-4-kinase isoform 2-beta, PIP4K2B, PIP5K2B
Target/Specificity	This PIP5K2B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 286-317 amino acids from the C-terminal region of human PIP5K2B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	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.
Storage	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.
Precautions	PIP5K2B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PIP4K2B (HGNC:8998)
Synonyms	PIP5K2B

Function	Participates in the biosynthesis of phosphatidylinositol 4,5- bisphosphate (PubMed:26774281, PubMed:9038203). Preferentially utilizes GTP, rather than ATP, for PI(5)P phosphorylation and its activity reflects changes in direct proportion to the physiological GTP concentration (PubMed:26774281). Its GTP-sensing activity is critical for metabolic adaptation (PubMed:26774281). PIP4Ks negatively regulate insulin signaling through a catalytic-independent mechanism. They interact with PIP5Ks and suppress PIP5K-mediated PtdIns(4,5)P2 synthesis and insulin-dependent conversion to PtdIns(3,4,5)P3 (PubMed:31091439).
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein. Cell membrane; Peripheral membrane protein. Nucleus. Cytoplasm Note=Associated with the plasma membrane and the endoplasmic reticulum
Tissue Location	Highly expressed in brain, heart, pancreas, skeletal muscle and kidney. Detected at lower levels in placenta, lung and liver.

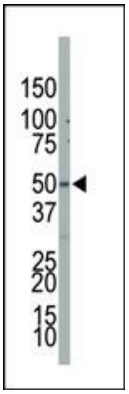
Background

PIP5K2B catalyzes the phosphorylation of phosphatidylinositol-4-phosphate on the fifth hydroxyl of the myo-inositol ring to form phosphatidylinositol-4,5-bisphosphate. It is a member of the phosphatidylinositol-4-phosphate 5-kinase family. The encoded protein sequence does not show similarity to other kinases, but the protein does exhibit kinase activity. Additionally, the encoded protein interacts with p55 TNF receptor.

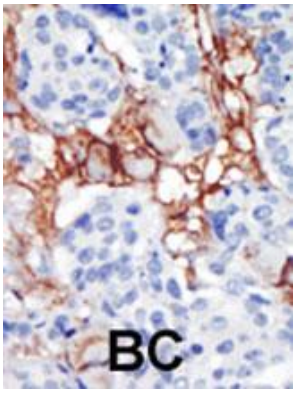
References

Rao, V.D., et al., Cell 94(6):829-839 (1998).
Castellino, A.M., et al., J. Biol. Chem. 272(9):5861-5870 (1997).

Images



The anti-PIP5K2B Pab (Cat. #AP8042b) is used in Western blot to detect PIP5K2B in NCI-H460 cell lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Light-induced tyrosine phosphorylation of rod outer segment membrane proteins regulate the translocation, membrane binding and activation of type II phosphatidylinositol-5-phosphate 4-kinase.
- Regulation of extranuclear PtdIns5P production by phosphatidylinositol phosphate 4-kinase 2alpha.