

#3296 Store at -20C

PIP5K1C Antibody

Cell Signaling
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	87, 90	Rabbit	#O60331	23396

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

PIP5K1C Antibody detects endogenous levels of total PIP5K1C protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues around Gly504 of human PIP5K1C. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Phosphatidylinositol-5-phosphate 4-kinases (PIP4Ks) synthesize phosphatidylinositol-4,5-bisphosphate (PtdIns(4,5)P₂), a key precursor in phosphoinositide signaling that directly modulates the activity of signaling proteins and cellular processes. There are two subfamilies of PIP kinases, type I and II, that generate PtdIns(4,5)P₂ from distinct substrate pools. PIP4 type I kinases use PtdIns5P as a substrate, whereas PIP5 type II kinases use PtdIns4P (1,2). In mammalian cells, three isoforms of each PIP4K and PIP5K subfamily, encoded by distinct genes, have been characterized (3-7). All PIP kinases are stimulated by phosphatidic acid, extensively regulated by ARF and Rho GTPases, and inhibited by protein kinase A and PI-stimulated autophosphorylation (8).

Background References

1. Rameh, L.E. et al. (1997) *Nature* 390, 192-6.
2. Zhang, X. et al. (1997) *J Biol Chem* 272, 17756-61.
3. Ishihara, H. et al. (1996) *J Biol Chem* 271, 23611-4.
4. Loijens, J.C. and Anderson, R.A. (1996) *J Biol Chem* 271, 32937-43.
5. Ishihara, H. et al. (1998) *J Biol Chem* 273, 8741-8.
6. Itoh, T. et al (1998) *J. Biol. Chem.* 273, 20292-20299
7. Boronenkov, I.V. et al. (1998) *Mol Biol Cell* 9, 3547-60.
8. Oude Weernink, P.A. et al. (2004) *Eur J Pharmacol* 500, 87-99.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster
X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse
GP: Guinea Pig Rab: rabbit All: all species expected

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