

PIP5K1A Antibody

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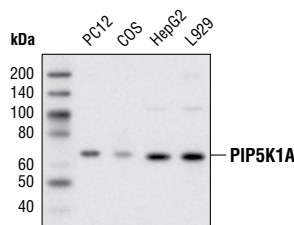
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Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	62 kDa	Rabbit**

Background: Phosphatidylinositol-4-phosphate 5-kinases (PIP5K) synthesize phosphatidylinositol-4,5-bisphosphate (PtdIns(4,5)P₂), a key precursor in phosphoinositide signaling that also regulates some proteins and cellular processes directly. There are two subfamilies of PIP5Ks, type I and II, that generate PtdIns(4,5)P₂ from distinct substrate pools. PIP5K1s use PtdIns4P as a substrate, whereas PIP5K2s use PtdIns5P (1,2). In mammalian cells, three isoforms of each PIP5K1 and PIP5K2 subfamily, encoded by distinct genes, have been characterized and named α , β and γ (3-7), and additional PIPKs likely remain to be discovered. All PIP5K isoforms are stimulated by phosphatidic acid, are extensively regulated by ARF and Rho GTPases, and inhibited by protein kinase A and PI-stimulated autophosphorylation (8).

Specificity/Sensitivity: PIP5K1A Antibody detects endogenous levels of total PIP5K1A protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues around Gly64 of human PIP5K1A. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using PIP5K1A Antibody.

Entrez-Gene ID #8394
Swiss-Prot Acc. #Q99755

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.