

PI 3-kinase C2 α (H-300): sc-67306

BACKGROUND

Phosphatidylinositol 3-kinases (PI3Ks) phosphorylate the 3' OH position of the inositol ring of inositol lipids. Human PI 3-kinase C2 α (PIK3C2A, C2-containing phosphatidylinositol kinase, p110 α or CPK) contains a C-terminal calcium-binding and phospholipid-binding module known as the C2 domain. The cDNA sequence of PI 3-kinase C2 α predicts a 1,686 amino acid protein that is 90% identical to mouse Cpk (term for the *Drosophila* homolog). Northern blot analysis reveals that PI 3-kinase C2 α is expressed as an 8 kb mRNA in a wide variety of tissues. *In vitro*, the PI 3-kinase C2 α enzyme can phosphorylate phosphatidylinositol and phosphatidylinositol-4-phosphate. The PI 3-kinase C2 α gene contains 32 exons and spans approximately 76 kb.

REFERENCES

- Molz, L., et al. 1996. Cpk is a novel class of *Drosophila* PtdIns 3-kinase containing a C2 domain. *J. Biol. Chem.* 271: 13892-13899.
- Domin, J., et al. 1997. Cloning of a human phosphoinositide 3-kinase with a C2 domain that displays reduced sensitivity to the inhibitor Wortmannin. *Biochem. J.* 326: 139-147.
- Caldwell, G.M., et al. 2001. Mapping of genes and transcribed sequences in a gene rich 400-kb region on human chromosome 11p15.1-p14. *Cytogenet. Cell Genet.* 92: 103-107.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603601. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Zheleznova, N.N., et al. 2003. The role of phosphatidylinositol-3-kinases p85/p110 and hVPS34 in endocytosis of EGF-receptor complexes. *Tsitologiya* 45: 574-581.

CHROMOSOMAL LOCATION

Genetic locus: PIK3C2A (human) mapping to 11p15.1; Pik3c2a (mouse) mapping to 7 F1.

SOURCE

PI 3-kinase C2 α (H-300) is a rabbit polyclonal antibody raised against amino acids 61-360 mapping near the N-terminus of PI 3-kinase C2 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

PI 3-kinase C2 α (H-300) is recommended for detection of PI 3-kinase C2 α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

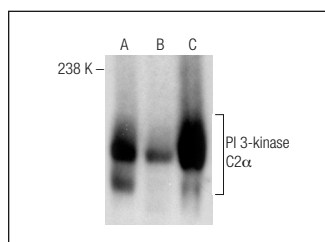
PI 3-kinase C2 α (H-300) is also recommended for detection of PI 3-kinase C2 α in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PI 3-kinase C2 α siRNA (h): sc-61340, PI 3-kinase C2 α siRNA (m): sc-61341, PI 3-kinase C2 α shRNA Plasmid (h): sc-61340-SH, PI 3-kinase C2 α shRNA Plasmid (m): sc-61341-SH, PI 3-kinase C2 α shRNA (h) Lentiviral Particles: sc-61340-V and PI 3-kinase C2 α shRNA (m) Lentiviral Particles: sc-61341-V.

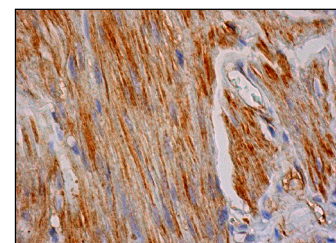
Molecular Weight of PI 3-kinase C2 α : 190 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

DATA



PI 3-kinase C2 α (H-300): sc-67306. Western blot analysis of PI 3-kinase C2 α expression in HeLa (A), Jurkat (B) and IMR-32 (C) whole cell lysates.



PI 3-kinase C2 α (H-300): sc-67306. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

- Harris, D.P., et al. 2011. Requirement for class II phosphoinositide 3-kinase C2 α in maintenance of glomerular structure and function. *Mol. Cell. Biol.* 31: 63-80.

RESEARCH USE

For research use only, not for use in diagnostic procedures.


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Try **PI 3-kinase C2 α (G-5): sc-365290** or **PI 3-kinase C2 α (17): sc-136298**, our highly recommended monoclonal alternatives to PI 3-kinase C2 α (H-300).