

PKC (H-300): sc-10800

BACKGROUND

Members of the protein kinase C (PKC) family play a key regulatory role in a variety of cellular functions including cell growth and differentiation, gene expression, hormone secretion and membrane function. PKCs were originally identified as serine/threonine protein kinases whose activity was dependent on calcium and phospholipids. Diacylglycerols (DAG) and tumor promoting phorbol esters bind to and activate PKC. PKCs can be subdivided into at least two major classes including conventional (c) PKC isoforms (α , β I, β II and γ) and novel (n) PKC isoforms (δ , ϵ , ζ , η and θ). Patterns of expression for each PKC isoform differ among tissues and PKC family members exhibit clear differences in their cofactor dependencies. For instance, the kinase activities of nPKC δ and ϵ are independent of Ca^{2+} . On the other hand, nPKC δ and ϵ , as well as all of the cPKC members, possess phorbol ester-binding activities and kinase activities.

REFERENCES

1. Takai, Y., et al. 1979. Calcium-dependent activation of a multifunctional protein kinase by membrane phospholipids. *J. Biol. Chem.* 254: 3692-3695.
2. Castagna, M., et al. 1982. Direct activation of calcium-activated, phospholipid-dependent protein kinase by tumor-promoting phorbol esters. *J. Biol. Chem.* 257: 7847-7851.

SOURCE

PKC (H-300) is a rabbit polyclonal antibody raised against amino acids 373-672 mapping at the C-terminus of PKC 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.

Available as agarose conjugate for immunoprecipitation, sc-10800 AC, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

PKC (H-300) is recommended for detection of all PKC family members of mouse, rat, human, *Drosophila melanogaster* and *Xenopus laevis* 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PKC (H-300) is also recommended for detection of all PKC family members in additional species, including equine, canine, bovine and avian.

Molecular Weight of PKC: 80 kDa.

Positive Controls: 3611-RF whole cell lysate: sc-2215, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

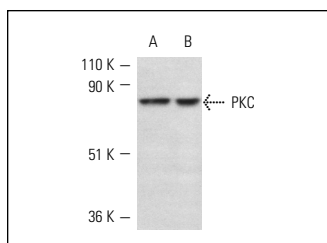
STORAGE

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

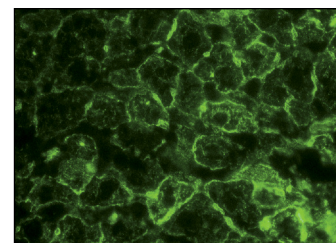
RESEARCH USE

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

DATA



PKC (H-300): sc-10800. Western blot analysis of PKC expression in 3611-RF (A) and NIH/3T3 (B) whole cell lysates.



PKC (H-300): sc-10800. Immunofluorescence staining of normal mouse liver frozen section showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

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2. Castoria, G., et al. 2004. Role of atypical protein kinase C in estradiol-triggered G₁/S progression of MCF7 cells. *Mol. Cell. Biol.* 24: 7643-7653.
3. Hutterer, A., et al. 2004. Sequential roles of Cdc42, Par-6, aPKC, and Lgl in the establishment of epithelial polarity during *Drosophila* embryogenesis. *Dev. Cell* 6: 845-854.
4. Crockett, D.K., et al. 2004. Identification of NPM-ALK interacting proteins by tandem mass spectrometry. *Oncogene* 23: 2617-2629.
5. Satoh, A., et al. 2004. PKC- δ and - ϵ regulate NF κ B activation induced by cholecystokinin and TNF- α in pancreatic acinar cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 287: G582-G591.
6. Niger, C., et al. 2010. Interaction of connexin43 and protein kinase C- δ during FGF2 signaling. *BMC Biochem.* 11: 14.
7. Olavarría, V.H., et al. 2010. Lipopolysaccharide primes the respiratory burst of *Atlantic salmon* SHK-1 cells through protein kinase C-mediated phosphorylation of p47phox. *Dev. Comp. Immunol.* 34: 1242-1253.
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9. Cucina, A., et al. 2012. Nicotine stimulates proliferation and inhibits apoptosis in colon cancer cell lines through activation of survival pathways. *J. Surg. Res.* 178: 233-241.



Try **PKC (A-3): sc-17769** or **PKC (A-9): sc-17804**, our highly recommended monoclonal alternatives to PKC (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PKC (A-3): sc-17769**.