SANTA CRUZ BIOTECHNOLOGY, INC.

PKC α (C-20): sc-208

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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, βI, βII and γ) and novel (n) PKC isoforms (δ, ε, ζ, η and θ). Patterns of expression for each PKC isoform differs 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.

SOURCE

PKC α (C-20) is available as either rabbit (sc-208) or goat (sc-208-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of PKC α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-208 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz (sc-208 X) reagent for ChIP application, 200 µg/0.1 ml.

APPLICATIONS

PKC α (C-20) is recommended for detection of PKC α and, to a lesser extent, PKC βI and PKC γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 α (C-20) is also recommended for detection of PKC α and, to a lesser extent, PKC βI and PKC γ in additional species, including equine, canine and bovine.

PKC α (C-20) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of PKC α: 80 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Jurkat whole cell lysate: sc-2204 or rat brain extract: sc-2392.

STORAGE

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

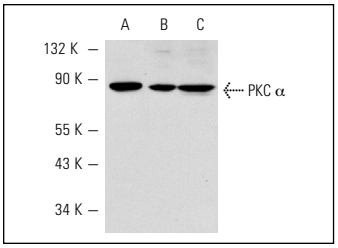
PROTOCOLS

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

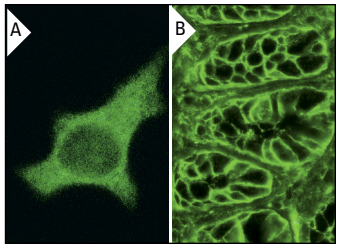
RESEARCH USE

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

DATA



PKC α (C-20)-G: sc-208-G. Western blot analysis of PKC α expression in Jurkat (**A**) and NIH/3T3 (**B**) whole cell lysates and rat brain extract (**C**).



PKC α (C-20): sc-208. Immunofluorescence staining of methanol-fixed HeLa cells (**A**) and normal mouse intestine frozen section showing cytoplasmic staining (**B**).

SELECT PRODUCT CITATIONS

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4. Tsai, R.K., et al. 2011. PKCδ-dependent signaling mediates ethambutol-induced toxic effects on human retinal pigment cells. Mol. Vis. 17: 1564-1576.
5. Hu, C.T., et al. 2011. Reactive oxygen species-mediated PKC and integrin signaling promotes tumor progression of human hepatoma Hep G2. Clin. Exp. Metastasis 28: 851-863.
6. Haid, D.C, et al. 2012. Receptors responsive to protein breakdown products in γ-cells and δ-cells of mouse, swine and human. Front. Physiol. 3: 65.
7. Chen, L., et al. 2012. Possible mechanisms underlying the biphasic regulatory effects of arachidonic acid on Ca^{2+} signaling in HEK 293 cells. Cell. Signal. 24: 1565-1572.
8. Liu, G.P., et al. 2012. I_2^{PP2A} regulates p53 and Akt correlatively and leads the neurons to abort apoptosis. Neurobiol. Aging 33: 254-264.
9. Yang, W., et al. 2012. EGFR-Induced and PKCε monoubiquitylation-dependent NFκB activation upregulates PKM2 expression and promotes tumorigenesis. Mol. Cell 48: 771-784.