SANTA CRUZ BIOTECHNOLOGY, INC.

PKC δ (C-20): sc-937

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 many different isoforms (α, βI, βII, γ, δ, ε, ζ, η, θ, λ/ι, μ and ν). 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.

CHROMOSOMAL LOCATION

Genetic locus: PRKCD (human) mapping to 3p21.1; Prkcd (mouse) mapping to 14 B.

SOURCE

PKC δ (C-20) is available as either rabbit (sc-937) or goat (sc-937-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of PKC δ 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-937 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PKC δ (C-20) is recommended for detection of PKS δ of mouse, rat, human and *Drosophila melanogaster* 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), 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).

PKC δ (C-20) is also recommended for detection of PKS δ in additional species, including equine and bovine.

Suitable for use as control antibody for PKC δ siRNA (h): sc-36253, PKC δ siRNA (m): sc-36246, PKC δ shRNA Plasmid (h): sc-36253-SH, PKC δ shRNA Plasmid (m): sc-36246-SH, PKC δ shRNA (h) Lentiviral Particles: sc-36253-V and PKC δ shRNA (m) Lentiviral Particles: sc-36246-V.

Molecular Weight of PKC δ: 78 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, 3611-RF whole cell lysate: sc-2215 or HeLa whole cell lysate: sc-2200.

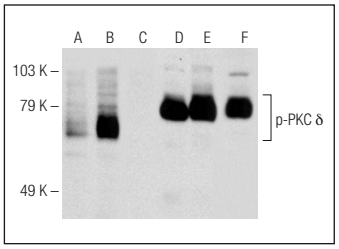
RESEARCH USE

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

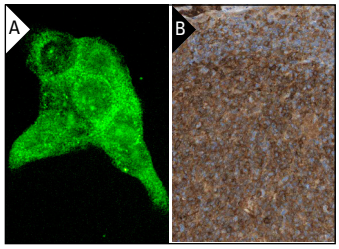
STORAGE

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

DATA



Western blot analysis of PKC δ phosphorylation in untreated (**A**,**D**), serum starved and serum treated (**B**,**E**) and serum starved, serum treated and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) HeLa whole cell lysates. Antibodies tested include p-PKC δ (Tyr 565)-R: sc-18372-R (**A**,**B**,**C**) and PKC δ (C-20): sc-937 (**D**,**E**,**F**).



PKC δ (C-20)-G: sc-937-G. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of lymphoid cells and squamous epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Kaneki, M., et al. 1999. Functional role for protein kinase Cβ as a regulator of stress-activated protein kinase activation and monocytic differentiation of myeloid leukemia cells. Mol. Cell. Biol. 19: 461-470.
2. Tsai, R.K., et al. 2011. PKCδ-dependent signaling mediates ethambutol-induced toxic effects on human retinal pigment cells. Mol. Vis. 17: 1564-1576.
3. De Marino, S., et al. 2011. Imbricatolic acid from *Juniperus communis L.* prevents cell cycle progression in CaLu-6 cells. Planta Med. 77: 1822-1828.
4. Adwan, T.S., et al. 2011. Regulated binding of importin-α to protein kinase Cδ in response to apoptotic signals facilitates nuclear import. J. Biol. Chem. 286: 35716-35724.
5. Freeley, M., et al. 2012. L-plastin regulates polarization and migration in chemokine-stimulated human T lymphocytes. J. Immunol. 188: 6357-6370.
6. Pal, D., et al. 2012. Novel regulation of protein kinase C-η. Biochem. Biophys. Res. Commun. 425: 836-841.
7. De Marco, P., et al. 2012. Insulin-like growth factor-I regulates GPER expression and function in cancer cells. Oncogene 32: 678-688.
8. Shen, Y.J., et al. 2012. Exercise preconditioning provides early cardioprotection against exhaustive exercise in rats: potential involvement of protein kinase C δ translocation. Mol. Cell. Biochem. 368: 89-102.

MONOS Satisfaction Guaranteed

Try **PKC δ (G-9): sc-8402** or **PKC (A-3): sc-17769**, our highly recommended monoclonal alternatives to PKC δ (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PKC δ (G-9): sc-8402**.