SANTA CRUZ BIOTECHNOLOGY, INC.

PKC δ (E-7): sc-518270

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, θ, λ/ι, μ and ν). 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 PKC δ and ε are independent of Ca^{2+}. On the other hand, most of the other PKC 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.
3. Kikkawa, U., et al. 1983. Protein kinase C as a possible receptor of tumor-promoting phorbol esters. J. Biol. Chem. 258: 11442-11445.
4. Nishizuka, Y., 1984. The role of protein kinase C in cell surface signal transduction and tumour promotion. Nature 308: 693-698.
5. Nishizuka, Y., 1984. Turnover of inositol phospholipids and signal transduction. Science 225: 1365-1370.

CHROMOSOMAL LOCATION

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

SOURCE

PKC δ (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 92-117 of PKC δ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKC δ (E-7) is available conjugated to agarose (sc-518270 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518270 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518270 PE), fluorescein (sc-518270 FITC), Alexa Fluor® 488 (sc-518270 AF488), Alexa Fluor® 546 (sc-518270 AF546), Alexa Fluor® 594 (sc-518270 AF594) or Alexa Fluor® 647 (sc-518270 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518270 AF680) or Alexa Fluor® 790 (sc-518270 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PKC δ (E-7) is recommended for detection of PKC δ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

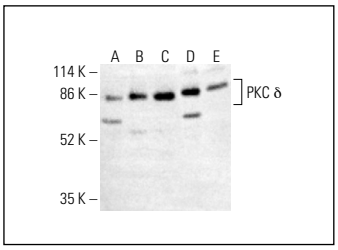
Molecular Weight of PKC δ: 78 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, THP-1 cell lysate: sc-2238 or 3611-RF whole cell lysate: sc-2215.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PKC δ (E-7): sc-518270. Western blot analysis of PKC δ expression in HeLa (**A**), MCF7 (**B**), THP-1 (**C**), 3611-RF (**D**) and PC-12 (**E**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.

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.

PROTOCOLS

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