SANTA CRUZ BIOTECHNOLOGY, INC.

p-PKC δ (Ser 645)-R: sc-18369-R

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). PKC isoforms can be activated through tyrosine phosphorylation and catalytically activated upon treatment with H_2O_2. The Tyr 155, 525, 523 and 565 residues in the catalytic domain are crucial for activation of these enzymes. The residue Ser 643 appears to be an autophosphorylation site.

CHROMOSOMAL LOCATION

Genetic locus: PRKCD (human) mapping to 3p21.1.

SOURCE

p-PKC δ (Ser 645)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 645 phosphorylated 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-18369-R P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

p-PKC δ (Ser 645)-R is recommended for detection of Ser 645 phosphorylated PKC δ of 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).

p-PKC δ (Ser 645)-R is also recommended for detection of correspondingly phosphorylated PKC δ in additional species, including equine, canine, bovine and avian.

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

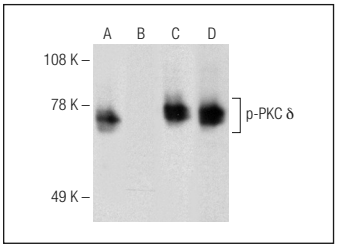
Molecular Weight of p-PKC δ: 78 kDa.

Positive Controls: HeLa + PMA cell lysate: sc-2258, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Western blot analysis of PKC δ phosphorylation in untreated (**A**,**C**) and lambda protein phosphatase (sc-200312A) treated (**B**,**D**) RAW 264.7 whole cell lysates. Antibodies tested include p-PKC δ (Ser 645)-R: sc-18369-R (**A**,**B**) and PKC δ (C-20): sc-937 (**C**,**D**).

SELECT PRODUCT CITATIONS

1. Lin, T.H., et al. 2013. CCL2 increases αvβ3 integrin expression and subsequently promotes prostate cancer migration. Biochim. Biophys. Acta 1830: 4917-4927.

RESEARCH USE

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

PROTOCOLS

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