SANTA CRUZ BIOTECHNOLOGY, INC.

# p-PKC δ (H-9): sc-374613

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 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 (H-9) is a mouse monoclonal antibody epitope corresponding to a short amino acid sequence containing Ser 645 phosphorylated 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.

p-PKC δ (H-9) is available conjugated to agarose (sc-374613 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374613 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374613 PE), fluorescein (sc-374613 FITC), Alexa Fluor® 488 (sc-374613 AF488), Alexa Fluor® 546 (sc-374613 AF546), Alexa Fluor® 594 (sc-374613 AF594) or Alexa Fluor® 647 (sc-374613 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374613 AF680) or Alexa Fluor® 790 (sc-374613 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374613 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

p-PKC δ (H-9) is recommended for detection of Ser 645 phosphorylated PKC δ of 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), 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).

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.

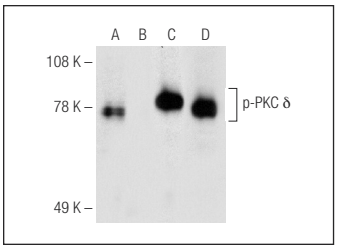
Molecular Weight of p-PKC δ: 78 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

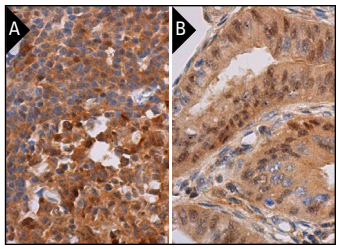
## RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




Western blot analysis of PKC δ phosphorylation in untreated (**A**,**C**) and lambda protein phosphatase (sc-200312A) treated (**B**,**D**) HeLa whole cell lysates. Antibodies tested include p-PKC δ (H-9): sc-374613 (**A**,**B**) and PKC δ (C-20): sc-937 (**C**,**D**).




p-PKC δ (H-9): sc-374613. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal center and cells in non-germinal center (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and nuclear staining of glandular cells (**B**).

## SELECT PRODUCT CITATIONS


1. Wu, S., et al. 2016. Herpes simplex virus 1 induces phosphorylation and reorganization of lamin A/C through the γ134.5 protein that facilitates nuclear egress. J. Virol. 90: 10414-10422.
2. Flores-Sanchez, F., et al. 2020. Pic protein from enteroaggregative *E. coli* induces different mechanisms for its dual activity as a mucus secretagogue and a mucinase. Front. Immunol. 11: 564953.


## 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.