

PKC γ (D-4): sc-166424

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 , β I, β II 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.

CHROMOSOMAL LOCATION

Genetic locus: PRKCG (human) mapping to 19q13.42; Prkcg (mouse) mapping to 7 A1.

SOURCE

PKC γ (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-33 at the N-terminus of PKC γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166424 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

PKC γ (D-4) is recommended for detection of PKC γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 γ siRNA (h): sc-36248, PKC γ siRNA (m): sc-36249, PKC γ shRNA Plasmid (h): sc-36248-SH, PKC γ shRNA Plasmid (m): sc-36249-SH, PKC γ shRNA (h) Lentiviral Particles: sc-36248-V and PKC γ shRNA (m) Lentiviral Particles: sc-36249-V.

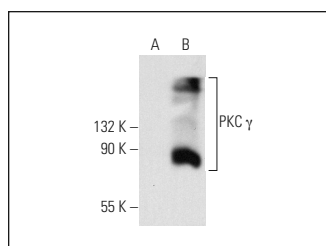
Molecular Weight of PKC γ : 76 kDa.

Positive Controls: PKC γ (h): 293T Lysate: sc-116200, mouse cerebellum extract: sc-2403 or rat cerebellum extract: sc-2398.

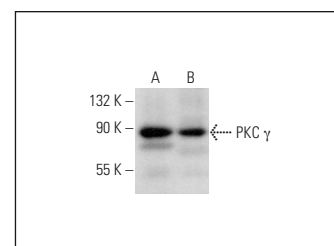
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 γ (D-4): sc-166424. Western blot analysis of PKC γ expression in non-transfected: sc-117752 (A) and human PKC γ transfected: sc-116200 (B) 293T whole cell lysates.



PKC γ (D-4): sc-166424. Western blot analysis of PKC γ expression in mouse cerebellum (A) and rat cerebellum (B) tissue extracts.

SELECT PRODUCT CITATIONS

1. Win, H.Y., et al. 2009. Role of protein kinase C- ι in transformed non-malignant RWPE-1 cells and androgen-independent prostate carcinoma DU-145 cells. *Cell Prolif.* 42: 182-194.
2. Sumagin, R., et al. 2013. Activation of PKC β II by PMA facilitates enhanced epithelial wound repair through increased cell spreading and migration. *PLoS ONE* 8: e55775.
3. Nasipak, B.T., et al. 2015. Opposing calcium-dependent signalling pathways control skeletal muscle differentiation by regulating a chromatin remodelling enzyme. *Nat. Commun.* 6: 7441.

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.

CONJUGATES

See **PKC γ (C-4): sc-166385** for PKC γ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.