

PKC β II (C-18): sc-210

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 and θ). 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 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: PRKCB (human) mapping to 16p12.2; Prkcb (mouse) mapping to 7 F3.

SOURCE

PKC β II (C-18) is available as either an affinity purified rabbit (sc-210) or goat (sc-210-G) polyclonal antibody raised against a peptide mapping at the C-terminus of PKC β II of human origin.

PRODUCT

Each vial contains either 200 μg (sc-210) or 100 μg (sc-210-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-210 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PKC β II (C-18) is recommended for detection of PKC β II of mouse, rat and 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), 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 β II (C-18) is also recommended for detection of PKC β II in additional species, including bovine and porcine.

Suitable for use as control antibody for PKC β siRNA (h): sc-29450, PKC β siRNA (m): sc-36255, PKC β shRNA Plasmid (h): sc-29450-SH, PKC β shRNA Plasmid (m): sc-36255-SH, PKC β shRNA (h) Lentiviral Particles: sc-29450-V and PKC β shRNA (m) Lentiviral Particles: sc-36255-V.

Molecular Weight of PKC β II: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or K-562 whole cell lysate: sc-2203.

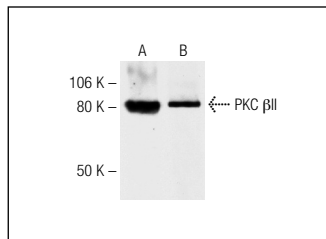
RESEARCH USE

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

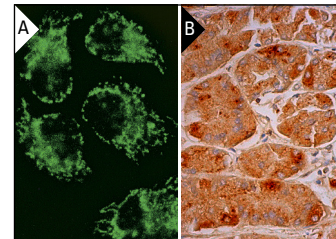
STORAGE

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

DATA



PKC β II (C-18): sc-210. Western blot analysis of PKC β II expression in HeLa (A) and A-431 (B) whole cell lysates.



PKC β II (C-18): sc-210. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Gong, J., et al. 1999. Differential stimulation of PKC phosphorylation of potassium channels by ZIP1 and ZIP2. *Science* 285: 1565-1569.
- Adomeit, A., et al. 1999. Bradykinin B_2 receptor-mediated mitogen-activated protein kinase activation in COS-7 cells requires dual signaling via both protein kinase C pathway and epidermal growth factor receptor transactivation. *Mol. Cell. Biol.* 19: 5289-5297.
- Kedei, N., et al. 2011. The synthetic bryostatin analog Merle 23 dissects distinct mechanisms of bryostatin activity in the LNCaP human prostate cancer cell line. *Biochem. Pharmacol.* 81: 1296-1308.
- Vargas-Medrano, J., et al. 2011. PKC β -dependent phosphorylation of the glycine transporter 1. *Neurochem. Int.* 59: 1123-1132.
- Hafeez, B.B., et al. 2011. Genetic ablation of PKC ϵ inhibits prostate cancer development and metastasis in transgenic mouse model of prostate adenocarcinoma. *Cancer Res.* 71: 2318-2327.
- Tsai, R.K., et al. 2011. PKC δ -dependent signaling mediates ethambutol-induced toxic effects on human retinal pigment cells. *Mol. Vis.* 17: 1564-1576.
- Miluzio, A., et al. 2011. Impairment of cytoplasmic eIF6 activity restricts lymphomagenesis and tumor progression without affecting normal growth. *Cancer Cell* 6: 765-775.
- Chen, L., et al. 2012. Possible mechanisms underlying the biphasic regulatory effects of arachidonic acid on Ca^{2+} signaling in HEK293 cells. *Cell. Signal.* 24: 1565-1572.



Try **PKC β II (F-7): sc-13149** or **PKC (A-3): sc-17769**, our highly recommended monoclonal alternatives to PKC β II (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PKC β II (F-7): sc-13149**.