**PKC β1 (E-3): sc-8049**

**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, γ and δ), novel (n) PKC isoforms (ε, η, θ and ι). 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 Ca²⁺. On the other hand, nPKC δ and ε, as well as all of the cPKC members, possess phorbol ester-binding activities and kinase activities.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: PRKCB (human) mapping to 16p12.2; Prkcb (mouse) mapping to 11a1.2.

**SOURCE**

PKC β1 (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 651-671 at the C-terminus of PKC β1 of human origin.

**PRODUCT**

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

PKC β1 (E-3) is available conjugated to agarose (sc-8049 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8049 HRP), 200 µg/ml, for WB, HRP(C) and ELISA; to either phycocerythrin (sc-8049 PE), fluorescein (sc-8049 FITC), Alexa Fluor® 488 (sc-8049 AF488), Alexa Fluor® 546 (sc-8049 AF546), Alexa Fluor® 594 (sc-8049 AF594) or Alexa Fluor® 647 (sc-8049 AF647), 200 µg/ml, for WB (RGB), IF, HRP(C) and FCM; and to either Alexa Fluor® 680 (sc-8049 AF680) or Alexa Fluor® 790 (sc-8049 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-8049 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**APPLICATIONS**

PKC β1 (E-3) is recommended for detection of PKC β1 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 β1 (E-3) is also recommended for detection of PKC β1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for PKC β siRNA (h): sc-29450, PKC β siRNA (m): sc-36255, PKC β siRNA (r): sc-108090, PKC β shRNA Plasmid (h): sc-29450-5, PKC β shRNA Plasmid (m): sc-36255-5, PKC β shRNA Plasmid (r): sc-108090-SH, PKC β shRNA (h) Lentiviral Particles: sc-29450-V, PKC β shRNA (m) Lentiviral Particles: sc-36255-V and PKC β shRNA (r) Lentiviral Particles: sc-108090-V.

Molecular Weight of PKC β1: 79 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, MEG-01 cell lysate: sc-2283 or A-673 cell lysate: sc-2414.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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