**PKC α (H-7): sc-8393**

**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 many different isoforms (α, β, γ, δ, ε, η, θ, ι, λ, 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: PRKCA (human) mapping to 17q24.2; Prkca (mouse) mapping to 11 E1.

**SOURCE**

PKC α (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 545-672 at the C-terminus of PKC α of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKC α (H-7) is available conjugated to agarose (sc-8393 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8393 HRP), 200 µg/ml, for WB, IHC(PO) and ELISA; and to either phycocerythrin (sc-8393 PE), fluorescein (sc-8393 FITC), Alexa Fluor® 488 (sc-8393 AF488) or Alexa Fluor® 647 (sc-8393 AF647), 200 µg/ml, for IF, IHC(PO) and FCM.

Blocking peptide available for competition studies, sc-8393 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

PKC α (H-7) is recommended for detection of PKC α 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).

Suitable for use as control antibody for PKC α siRNA (h): sc-36243, PKC α siRNA (m): sc-36244, PKC α siRNA (r): sc-108089, PKC α shRNA Plasmid (h): sc-36243-3H, PKC α shRNA Plasmid (m): sc-36244-3H, PKC α shRNA Plasmid (r): sc-108089-3H, PKC α shRNA (h) Lentiviral Particles: sc-36243-V, PKC α shRNA (m) Lentiviral Particles: sc-36244-V and PKC α shRNA (r) Lentiviral Particles: sc-108089-V.

Molecular Weight of PKC α: 80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or rat brain extract: sc-2392.

**DATA**

Western blot analysis of PKC α phosphorylation in untreated (A, D), Ser/Thr Phosphorylation Induction Cocktail (sc-36232A) treated (B, E) and Ser/Thr Phosphorylation Induction Cocktail (sc-36232A) and lambda protein phosphatase (sc-200312A) treated (C, F) Jurkat whole cell lysates. Antibodies tested include p-PKC α (pT638.35: sc-136018(A, B, C) and PKC α (H-7): sc-8393 (D, E, F).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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