**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, ζ, η, θ, λ, γδ, 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 θ and ε are independent of Ca²⁺. On the other hand, most of the other PKC members possess phorbol ester-binding activities and kinase activities.

**REFERENCES**


**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 645-672 at the C-terminus of PKC α 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 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, IHOP and ELISA, to either phycoerythrin (sc-8393 PE), fluorescein (sc-8393 FITC), Alexa Fluor® 488 (sc-8393 AF488), Alexa Fluor® 546 (sc-8393 AF546), Alexa Fluor® 594 (sc-8393 AF594) or Alexa Fluor® 647 (sc-8393 AF647), 200 µg/ml for WB (RGB), IF, IHC (and FCM); and to either Alexa Fluor® 680 (sc-8393 AF680) or Alexa Fluor® 790 (sc-8393 AF790), 200 µg/ml for Near-Infrared (NIR) WB, IF 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).

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 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 1:30-1:300).

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-SH, PKC α shRNA Plasmid (m): sc-36244-SH, PKC α shRNA Plasmid (r): sc-108089-SH, 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: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

**DATA**

Simultaneous direct near-infrared western blot analysis of PKC α expression, detected with PKC α (H-7) Alexa Fluor® 790; sc-8393 AF790 and β-Actin expression, detected with β-Actin (C4) Alexa Fluor® 680; sc-47776 AF680 in HeLa (A), Jurkat (B), MOLT-4 (C), NIH/3T3 (D) and 3811 PF (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 680: sc-516730.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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