SANTA CRUZ BIOTECHNOLOGY, INC.

PKC λ/ι (N-17): sc-1091

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, βI, βII, γ, δ, ε, ζ, η, λ, ν, μ, ι, 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 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: PRKCI (human) mapping to 3q26.2; Prkci (mouse) mapping to 3 A3.

SOURCE

PKC λ/ι (N-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of PKC λ/ι of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKC λ/ι (N-17) is available conjugated to agarose (sc-1091 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-1091 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PKC λ/ι (N-17) is recommended for detection of PKC λ/ι 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 λ/ι siRNA (h): sc-36257, PKC λ/ι siRNA (m): sc-36258, PKC λ/ι siRNA (r): sc-270297, PKC λ/ι shRNA Plasmid (h): sc-36257-SH, PKC λ/ι shRNA Plasmid (m): sc-36258-SH, PKC λ/ι shRNA Plasmid (r): sc-270297-SH, PKC λ/ι shRNA (h) Lentiviral Particles: sc-36257-V, PKC λ/ι shRNA (m) Lentiviral Particles: sc-36258-V, and PKC λ/ι shRNA (r) Lentiviral Particles: sc-270297-V.

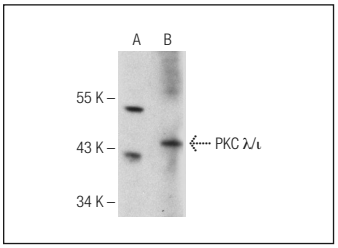
Molecular Weight of PKC λ/ι: 68 kDa.

Positive Controls: NCI-H929 whole cell lysate: sc-364786, rat brain extract: sc-2392 or MIA PaCa-2 cell lysate: sc-2285.

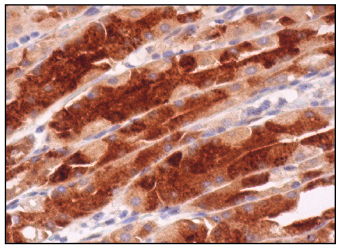
STORAGE

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

DATA



PKC λ/ι (N-17): sc-1091. Western blot analysis of PKC λ/ι expression in NCI-H929 whole cell lysate (**A**) and rat brain tissue extract (**B**).



PKC λ/ι (N-17): sc-1091. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Das, K.C., et al. 1998. Protein kinase Cd-dependent induction of manganese superoxide dismutase gene expression by microtubule-active anticancer drugs. J. Biol. Chem. 273: 34639-34645.
2. Matsumoto, M., et al. 2003. PKCλ in liver mediates Insulin-induced SREBP-1c expression and determines both hepatic lipid content and overall Insulin sensitivity. J. Clin. Invest. 112: 935-944.
3. Patel, N., et al. 2003. Intracellular segregation of phosphatidylinositol-3,4,5-trisphosphate by Insulin-dependent actin remodeling in L6 skeletal muscle cells. Mol. Cell. Biol. 23: 4611-4626.
4. Papp, H., et al. 2003. Protein kinase C isozymes regulate proliferation and high cell density-mediated differentiation in HaCaT keratinocytes. Exp. Dermatol. 12: 811-824.
5. Varga, A., et al. 2004. Tumor grade-dependent alterations in the protein kinase C isoform pattern in urinary bladder carcinomas. Eur. Urol. 46: 462-465.
6. Heegal, M.A., et al. 2005. Activation of PKC modulates blood-brain barrier endothelial cell permeability changes induced by hypoxia and posthypoxic reoxygenation. Am. J. Physiol. Heart Circ. Physiol. 289: H2012-H2019.
7. Ma, H.T., et al. 2006. Protein kinase C β and δ isoenzymes mediate cholesterol accumulation in PMA-activated macrophages. Biochem. Biophys. Res. Commun. 349: 214-220.

RESEARCH USE

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