SANTA CRUZ BIOTECHNOLOGY, INC.

PKC λ/ι (H-76): sc-11399

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, θ, λ/ι, 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: PRKCI (human) mapping to 3q26.2; Prkci (mouse) mapping to 3 A3.

SOURCE

PKC λ/ι (H-76) is a rabbit polyclonal antibody raised against amino acids 168-243 mapping near the N-terminus of PKC λ/ι of human origin.

PRODUCT

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

APPLICATIONS

PKC λ/ι (H-76) 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).

PKC λ/ι (H-76) is also recommended for detection of PKC λ/ι in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PKC λ/ι siRNA (h): sc-36257, PKC λ/ι siRNA (m): sc-36258, PKC λ/ι shRNA Plasmid (h): sc-36257-SH, PKC λ/ι shRNA Plasmid (m): sc-36258-SH, PKC λ/ι shRNA (h) Lentiviral Particles: sc-36257-V and PKC λ/ι shRNA (m) Lentiviral Particles: sc-36258-V.

Molecular Weight of PKC λ/ι: 68 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or MIA PaCa-2 cell lysate: sc-2285.

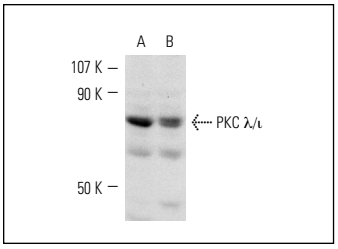
STORAGE

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

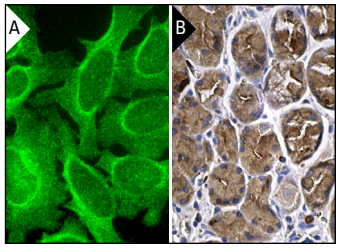
RESEARCH USE

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

DATA



PKC λ/ι (H-76): sc-11399. Western blot analysis of PKC λ/ι expression in MIA PaCa-2 (**A**) and Hela (**B**) whole cell lysates.



PKC λ/ι (H-76): sc-11399. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Castrillo, A., et al. 2003. Potentiation of protein kinase C ζ activity by 15-deoxy-δ(12,14)-prostaglandin J2 induces an imbalance between mitogen-activated protein kinases and NFκB that promotes apoptosis in macrophages. Mol. Cell. Biol. 23: 1196-1208.
2. Holden, N.S., et al. 2008. Phorbol ester-stimulated NFκB-dependent transcription: roles for isoforms of novel protein kinase C. Cell. Signal. 20: 1338-1348.
3. Huber, T.B., et al. 2009. Loss of podocyte aPKCλ/ι causes polarity defects and nephrotic syndrome. J. Am. Soc. Nephrol. 20: 798-806.
4. Kirschner, N., et al. 2011. CD44 regulates tight-junction assembly and barrier function. J. Invest. Dermatol. 131: 932-943.
5. von Brandenstein, M., et al. 2012. MicroRNA 15a, inversely correlated to PKCα, is a potential marker to differentiate between benign and malignant renal tumors in biopsy and urine samples. Am. J. Pathol. 180: 1787-1797.
6. Parker, S.S., et al. 2013. Competing molecular interactions of αPKC isoforms regulate neuronal polarity. Proc. Natl. Acad. Sci. USA 110: 14450-14455.
7. Chen, C., et al. 2016. Epigenetic modification of PKMζ rescues aging-related cognitive impairment. Sci. Rep. 6: 22096.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.