SANTA CRUZ BIOTECHNOLOGY, INC.

PKC λ/ι (H-12): sc-17837

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 at least two major classes, including conventional (c) PKC isoforms (α, βI, βII and γ) and novel (n) PKC isoforms (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-12) is a mouse monoclonal antibody raised against amino acids 168-243 of PKC λ/ι of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PKC λ/ι (H-12) is available conjugated to agarose (sc-17837 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-17837 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17837 PE), fluorescein (sc-17837 FITC), Alexa Fluor® 488 (sc-17837 AF488), Alexa Fluor® 546 (sc-17837 AF546), Alexa Fluor® 594 (sc-17837 AF594) or Alexa Fluor® 647 (sc-17837 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17837 AF680) or Alexa Fluor® 790 (sc-17837 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PKC λ/ι (H-12) is recommended for detection of PKC λ/ι of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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) 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.

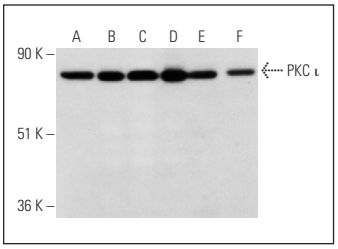
Molecular Weight of PKC λ/ι: 68 kDa.

Positive Controls: H4 cell lysate: sc-2408, A549 cell lysate: sc-2413 or Hela whole cell lysate: sc-2200.

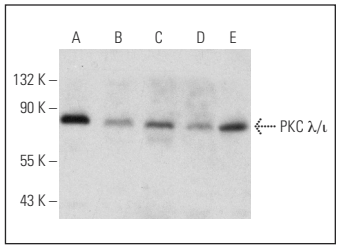
STORAGE

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 (H-12): sc-17837. Western blot analysis of PKC ι expression in NCI-H1688 (**A**), A549 (**B**), SHP-77 (**C**), A-431 (**D**), SK-N-MC (**E**) and H4 (**F**) whole cell lysates.



PKC λ/ι (H-12): sc-17837. Western blot analysis of PKC λ/ι expression in HeLa (**A**), Hep G2 (**B**), c4 (**C**), EOC 20 (**D**) and KNRK (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bicaku, E., et al. 2005. Cyclin-dependent kinase activating kinase/Cdk7 co-localizes with PKC-ι in human glioma cells. Tissue Cell 37: 53-58.
2. Fugier, E., et al. 2009. The glyceraldehyde-3-phosphate dehydrogenase and the small GTPase Rab 2 are crucial for *Brucella* replication. PLoS Pathog. 5: e1000487.
3. Huber, T.B., et al. 2009. Loss of podocyte aPKC λ/ι causes polarity defects and nephrotic syndrome. J. Am. Soc. Nephrol. 20: 798-806.
4. Freeley, M., et al. 2012. L-plastin regulates polarization and migration in chemokine-stimulated human T lymphocytes. J. Immunol. 188: 6357-6370.
5. Kim, M.W., et al. 2019. Anti-EGF receptor aptamer-guided co-delivery of anti-cancer siRNAs and quantum dots for theranostics of triple-negative breast cancer. Theranostics 9: 837-852.
6. Su, X., et al. 2021. LRRC19 promotes permeability of the gut epithelial barrier through degrading PKC-ζ and PKCι/λ to reduce expression of ZO1, ZO3, and Occludin. Inflamm. Bowel Dis. 27: 1302-1315.
7. Trelford, C.B. and Di Guglielmo, G.M. 2021. Canonical and non-canonical TGFβ signaling activate autophagy in an ULK1-dependent manner. Front. Cell Dev. Biol. 9: 712124.
8. Perveen, K., et al. 2021. Characterization of the transient deficiency of PKC isozyme levels in immature cord blood T cells and its connection to anti-allergic cytokine profiles of the matured cells. Int. J. Mol. Sci. 22: 12650.
9. Köditz, B., et al. 2022. Novel noninvasive marker of regression of clear cell renal cell carcinoma (ccRCC). Turk. J. Urol. 48: 49-57.

RESEARCH USE

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