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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

PKC ζ (H-1): sc-17781

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.

REFERENCES

1. Takai, Y., et al. 1979. Calcium-dependent activation of a multifunctional protein kinase by membrane phospholipids. J. Biol. Chem. 254: 3692-3695.
2. Castagna, M., et al. 1982. Direct activation of calcium-activated, phospholipid-dependent protein kinase by tumor-promoting phorbol esters. J. Biol. Chem. 257: 7847-7851.

CHROMOSOMAL LOCATION

Genetic locus: PRKCZ (human) mapping to 1p36.33; Prkcz (mouse) mapping to 4 E2.

SOURCE

PKC ζ (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 570-592 at the C-terminus of PKC ζ of rat 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 ζ (H-1) is available conjugated to agarose (sc-17781 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17781 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17781 PE), fluorescein (sc-17781 FITC), Alexa Fluor® 488 (sc-17781 AF488), Alexa Fluor® 546 (sc-17781 AF546), Alexa Fluor® 594 (sc-17781 AF594) or Alexa Fluor® 647 (sc-17781 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17781 AF680) or Alexa Fluor® 790 (sc-17781 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-17781 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

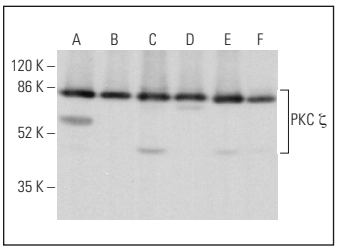
PKC ζ (H-1) is recommended for detection of PKC ζ of mouse, rat and human origin by Western Blotting (starting dilution 1:10,000, dilution range 1:10,000-1:20,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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); may cross-react with PKC ι and PKC λ.

Suitable for use as control antibody for PKC ζ siRNA (h): sc-29451, PKC ζ siRNA (m): sc-36254, PKC ζ shRNA Plasmid (h): sc-29451-SH, PKC ζ shRNA Plasmid (m): sc-36254-SH, PKC ζ shRNA (h) Lentiviral Particles: sc-29451-V and PKC ζ shRNA (m) Lentiviral Particles: sc-36254-V.

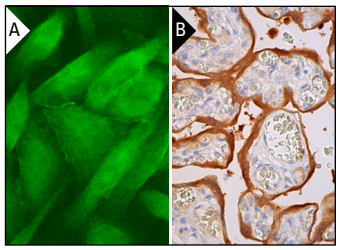
Molecular Weight of PKC : 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or SH-SY5Y cell lysate: sc-3812.

DATA



PKC ζ (H-1): sc-17781. Western blot analysis of PKC ζ expression in HeLa (**A**), IMR-32 (**B**), SH-SY5Y (**C**), AT3B-1 (**D**), NIH/3T3 (**E**) and EOC 20 (**F**) whole cell lysates.



PKC ζ (H-1) Alexa Fluor® 488: sc-17781 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). PKC ζ (H-1): sc-17781. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Lafuente, M.J., et al. 2003. Regulation of mature T lymphocyte proliferation and differentiation by Par-4. EMBO J. 22: 4689-4698.
2. Gao, T., et al. 2019. PKC ζ phosphorylates SIRT6 to mediate fatty acid β-oxidation in colon cancer cells. Neoplasia 21: 61-73.
3. Li, J., et al. 2019. Sirtuin 1 represses PKC ζ activity through regulating interplay of acetylation and phosphorylation in cardiac hypertrophy. Br. J. Pharmacol. 176: 416-435.
4. Schiffhauer, E.S., et al. 2019. Myosin IIB assembly state determines its mechanosensitive dynamics. J. Cell Biol. 218: 895-908.
5. Smalley, T., et al. 2019. Analysis of PKC ζ protein levels in normal and malignant breast tissue subtypes. Oncol. Lett. 17: 1537-1546.

RESEARCH USE

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