SANTA CRUZ BIOTECHNOLOGY, INC.

PKC η (31): sc-136036

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, υ 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.
3. Kikkawa, U., et al. 1983. Protein kinase C as a possible receptor of tumor-promoting phorbol esters. J. Biol. Chem. 258: 11442-11445.
4. Nishizuka, Y. 1984. The role of protein kinase C in cell surface signal transduction and tumour promotion. Nature 308: 693-698.
5. Nishizuka, Y. 1984. Turnover of inositol phospholipids and signal transduction. Science 225: 1365-1370.
6. Ohno, S., et al. 1991. Structural and functional diversities of a family of signal transducing protein kinases, protein kinase C family; two distinct classes of PKC, conventional cPKC and novel nPKC. Adv. Enzyme Regul. 31: 287-303.
7. Olivier, A.R., et al. 1991. Expression and characterization of protein kinase C-δ. Eur. J. Biochem. 200: 805-810.

CHROMOSOMAL LOCATION

Genetic locus: PRKCH (human) mapping to 14q23.1; Prkch (mouse) mapping to 12 C3.

SOURCE

PKC η (31) is a mouse monoclonal antibody raised against amino acids 181-334 of PKC η of mouse origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

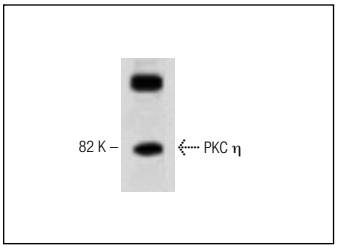
PKC η (31) is recommended for detection of PKC η of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

Suitable for use as control antibody for PKC η siRNA (h): sc-44019, PKC η siRNA (m): sc-44020, PPKC η shRNA Plasmid (h): sc-44019-SH, PKC η shRNA Plasmid (m): sc-44020-SH, PKC η shRNA (h) Lentiviral Particles: sc-44019-V and PKC η shRNA (m) Lentiviral Particles: sc-44020-V.

Molecular Weight of PKC η: 78-82 kDa.

Positive Controls: mouse lung extract: sc-2390 or WI-38 whole cell lysate: sc-364260.

DATA



PKC η (31): sc-136036. Western blot analysis of PKC η expression in WI-38 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kedei, N., et al. 2011. The synthetic bryostatin analog Merle 23 dissects distinct mechanisms of bryostatin activity in the LNCaP human prostate cancer cell line. Biochem. Pharmacol. 81: 1296-1308.
2. Ma, P., et al. 2015. Expression of protein kinase C isoforms in cultured human Tenon's capsule fibroblast cells. Mol. Med. Rep. 12: 6025-6030.

RESEARCH USE

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

PROTOCOLS

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