

PKC μ (A-20): sc-638

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 , β I, β II, γ , δ , ϵ , ζ , η , θ , ι , λ , 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: PRKD1 (human) mapping to 14q11; Prkd1 (mouse) mapping to 12 B3.

SOURCE

PKC μ (A-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of PKC μ of mouse origin.

PRODUCT

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

PKC μ (A-20) is available conjugated to agarose (sc-638 AC), 500 μg /0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-638 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PKC μ (A-20) is recommended for detection of PKC μ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PKC μ siRNA (h): sc-36245, PKC μ siRNA (m): sc-36260, PKC μ shRNA Plasmid (h): sc-36245-SH, PKC μ shRNA Plasmid (m): sc-36260-SH, PKC μ shRNA (h) Lentiviral Particles: sc-36245-V and PKC μ shRNA (m) Lentiviral Particles: sc-36260-V.

Molecular Weight of PKC μ : 115 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, 3611-RF whole cell lysate: sc-2215 or A-431 whole cell lysate: sc-2201.

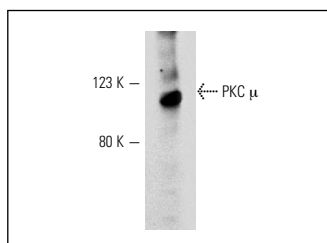
STORAGE

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

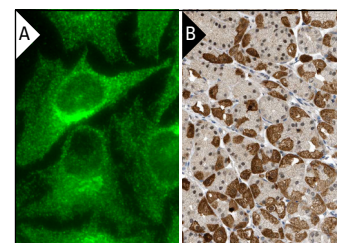
RESEARCH USE

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

DATA



PKC μ (A-20): sc-638. Western blot analysis of PKC μ expression in 3611-RF whole cell lysate.



PKC μ (A-20): sc-638. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic and nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program. (B).

SELECT PRODUCT CITATIONS

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- Ernest Dodd, M., et al. 2005. Regulation of protein kinase D during differentiation and proliferation of primary mouse keratinocytes. *J. Invest. Dermatol.* 125: 294-306.
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- von Brandenstein, M., et al. 2011. Protein kinase C α regulates nuclear pri-microRNA 15a release as part of endothelin signaling. *Biochim. Biophys. Acta* 1813: 1793-1802.
- Gan, H., et al. 2013. Protein kinase D promotes airway epithelial barrier dysfunction and permeability through down-regulation of claudin-1. *J. Biol. Chem.* 288: 37343-37354.

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