

PKC ζ (C-20): sc-216

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 , β I, β II and γ) and novel (n) PKC isoforms (δ , ϵ , ζ , η and θ). Patterns of expression for each PKC isoform differs among tissues and PKC family members exhibit clear differences in their cofactor dependencies. For instance, the kinase activities of nPKC δ and ϵ are independent of Ca^{2+} . On the other hand, nPKC δ and ϵ , as well as all of the cPKC members, possess phorbol ester-binding activities and kinase activities.

CHROMOSOMAL LOCATION

Genetic locus: PRKCZ (human) mapping to 1p36.33, PRKCI (human) mapping to 3q26.2; Prkcz (mouse) mapping to 4 E2, Prkci (mouse) mapping to 3 A3.

SOURCE

PKC ζ (C-20) is available as either rabbit (sc-216) or goat (sc-216-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of PKC ζ of rat origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-216 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PKC ζ (C-20) is recommended for detection of nPKC ζ and PKC λ/ι of mouse, rat, human, *Drosophila melanogaster*, *Xenopus laevis* and zebrafish 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PKC ζ (C-20) is also recommended for detection of nPKC ζ and PKC λ/ι in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of PKC ζ : 80 kDa.

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

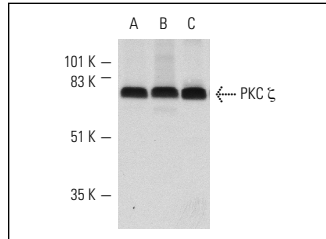
STORAGE

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

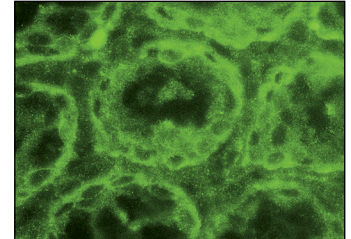
RESEARCH USE

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

DATA



PKC ζ (C-20): sc-216. Western blot analysis of PKC ζ expression in NIH/3T3 (A), 3611-RF (B) and A-431 (C) whole cell lysates.



PKC ζ (C-20): sc-216. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

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- Chen, F., et al. 2013. Phospholipase D2 mediates signaling by ATPase class I type 8B membrane 1. J. Lipid Res. 54: 379-385.
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Try **PKC ζ (H-1): sc-17781** or **PKC ζ (B-7): sc-393218**, our highly recommended monoclonal alternatives to PKC ζ (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PKC ζ (H-1): sc-17781**.