

PLC β 3 (C-20): sc-403

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a critical role in the initiation of receptor mediated signal transduction through the generation of the two second messengers, inositol 1, 4, 5-triphosphate and diacylglycerol from phosphatidylinositol 4, 5 bisphosphate. A total of eight mammalian PLC isozymes have been described (PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1 and PLC δ). The γ -type enzymes are unique in that they contain SH2 and SH3 domains. Moreover, the two γ -type enzymes, but not the β and δ isozymes, are subject to activation by a number of protein tyrosine kinases which associate with their SH2 domains and induce their activation by phosphorylation. In contrast, activation of PLC β 1, PLC β 2 and PLC β 3 is mediated by the α subunits of the G_q class of heterotrimeric G proteins and by certain $\beta\gamma$ G protein subunits. The regulatory mechanisms for PLC δ 1 and PLC δ 2 are not yet resolved.

CHROMOSOMAL LOCATION

Genetic locus: PLCB3 (human) mapping to 11q13.1; Plcb3 (mouse) mapping to 19 A.

SOURCE

PLC β 3 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PLC β 3 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-403 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PLC β 3 (C-20) is recommended for detection of PLC β 3 of mouse, rat, human and hamster origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PLC β 3 (C-20) is also recommended for detection of PLC β 3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PLC β 3 siRNA (h): sc-36272, PLC β 3 siRNA (m): sc-36273, PLC β 3 shRNA Plasmid (h): sc-36272-SH, PLC β 3 shRNA Plasmid (m): sc-36273-SH, PLC β 3 shRNA (h) Lentiviral Particles: sc-36272-V and PLC β 3 shRNA (m) Lentiviral Particles: sc-36273-V.

Molecular Weight of PLC β 3: 152 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, MCF7 whole cell lysate: sc-2206 or KNRK whole cell lysate: sc-2214.

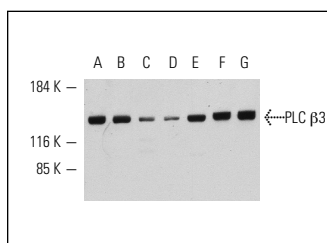
STORAGE

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

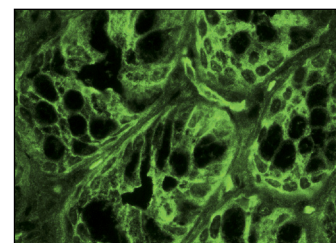
RESEARCH USE

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

DATA



PLC β 3 (C-20): sc-403. Western blot analysis of PLC β 3 expression in SK-BR-3 (A), MCF7 (B), U-937 (C), CHO-K1 (D), A-431 (E), NIH/3T3 (F) and KNRK (G) whole cell lysates.



PLC β 3 (C-20): sc-403. Immunofluorescence staining of normal mouse intestine frozen section showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

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- Xie, J., et al. 2011. Phosphatidylinositol 4,5-bisphosphate (PIP₂) controls magnesium gatekeeper TRPM6 activity. *Sci. Rep.* 1: 146.
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Try PLC β 3 (D-7): sc-133231 or PLC β 3 (H-3): sc-133140, our highly recommended monoclonal alternatives to PLC β 3 (C-20).