SANTA CRUZ BIOTECHNOLOGY, INC.

PLC β3 (L-17): sc-31760

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The Power to Question

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 β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC δ1 and PLC δ2). 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 phosphoryation. In contrast, activation of PLC β1, PLC β2 and PLC β3 is mediated by the a subunits of the Gq class of heterotrimeric G proteins and by certain bg G protein subunits. The regulatory mechanisms for PLC δ1 and PLC δ2 are not yet resolved.

CHROMOSOMAL LOCATION

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

SOURCE

PLC β3 (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PLC β3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PLC β3 (L-17) is recommended for detection of PLC β3 of mouse, rat and human 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).

PLC β3 (L-17) is also recommended for detection of PLC β3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLC β3 siRNA (h): sc-36272, PLC β3 siRNA (m): sc-36273, PLC β3 shRNA Plasmid (h): sc-36272-SH, PLC β3 shRNA Plasmid (m): sc-36273-SH, PLC β3 shRNA (h) Lentiviral Particles: sc-36272-V andr PLC β3 shRNA (m) Lentiviral Particles: sc-36273-V.

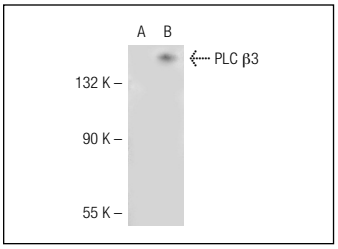
Molecular Weight of PLC β3: 152 kDa.

Positive Controls: PLC β3 (m): 293T Lysate: sc-122623, MCF7 whole cell lysate: sc-2206 or U-937 cell lysate: sc-2239.

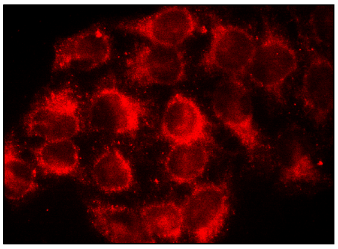
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PLC β3 (L-17): sc-31760. Western blot analysis of PLC β3 expression in non-transfected: sc-117752 (**A**) and mouse PLC β3 transfected: sc-122623 (**B**) 293T whole cell lysates.



PLC β3 (L-17): sc-31760. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **PLC β3 (D-7): sc-133231** or **PLC β3 (H-3): sc-133140**, our highly recommended monoclonal alternatives to PLC β3 (L-17).