SANTA CRUZ BIOTECHNOLOGY, INC.

PLC β1 (R-233): sc-9050



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. There are many mammalian PLC isozymes, including PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1 and PLC δ 2 and PLC ϵ . PLC β 1, one of the PLC β isozymes, exists as two immunologically distinguishable proteins (PLC- β 1a) and (PLC β 1b). The two isoforms encode in two distinct transcripts and are generated by alternative splicing of a single gene. PLC β 1a is preferentially expressed in the cytosol, whereas PLC β 1b is predominantly localized in the nuclei. PLC β 1 is a G protein-dependent phosphodiesterase that hydrolyses phosphatidylinositol 4,5 biphosphate into inositol 1,4,5-triphosphate and diacylglycerol after the stimulation of a variety of neurotransmitter receptors at the cell surface. The C-terminal region of PLC β 1 mas G_q GAP activity and has ability to interact with G_q and other PLC- β 1 molecules.

CHROMOSOMAL LOCATION

Genetic locus: PLCB1 (human) mapping to 20p12.3; Plcb1 (mouse) mapping to 2 F3.

SOURCE

PLC β 1 (R-233) is a rabbit polyclonal antibody raised against amino acids 831-1063 mapping within an internal region of PLC β 1 of rat origin.

PRODUCT

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

APPLICATIONS

PLC β1 (R-233) is recommended for detection of PLC β1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PLC β 1 siRNA (h): sc-36266, PLC β 1 siRNA (m): sc-36267, PLC β 1 shRNA Plasmid (h): sc-36266-SH, PLC β 1 shRNA Plasmid (m): sc-36267-SH, PLC β 1 shRNA (h) Lentiviral Particles: sc-36266-V and PLC β 1 shRNA (m) Lentiviral Particles: sc-36267-V.

Molecular Weight of PLC β 1: 150 kDa.

STORAGE

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

PROTOCOLS

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

RESEARCH USE

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

DATA





of formalin-fixed, paraffin-embedded human brain

mbrane and cytoplasmic staining.

PLC β 1 (R-233): sc-9050. Western blot analysis of PLC β 1 expression in HeLa whole cell lysate (**A**) and mouse brain tissue extract (**B**).

SELECT PRODUCT CITATIONS

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- 7. Montaña, M., et al. 2012. Cellular neurochemical characterization and subcellular localization of phospholipase C β 1 in rat brain. Neuroscience 222: 239-268.
- Chun, Y.S., et al. 2013. Impaired N-cadherin-mediated adhesion increases the risk of inducible ventricular arrhythmias in isolated rat hearts. Sci. Res. Essays 7: 2983-2991.
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MONOS Satisfation Guaranteed

Try **PLC \beta1 (D-8): sc-5291** or **PLC \beta1 (16): sc-136040**, our highly recommended monoclonal alternatives to PLC β 1 (R-233).