SANTA CRUZ BIOTECHNOLOGY, INC.

PLC β2 (H-255): sc-9018

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a crucial 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 β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC δ1, PLC δ2 and PLC ε). PLC βs are the only PLC isforms that are regulated by G protein subunits and are activated by a heterotrimeric GTP-binding protein linked to various cell surface receptors. Two alternatively spliced forms (1,181 and 1,166 amino acids) of PLC β2 are generated in hematopoietic cells that differ in the carboxyl-terminal sequence implicated in interaction of PLC β enzymes with $G_{\alpha q}$.The pleckstrin homology domain of PLC β2 is required for its targeting to the membrane and for substrate hydrolysis and its linker region exerts an inhibitory efect on basal PLC β2 activity. PLC β2 plays a major role in platelet activation and is mainly expressed in the periphery of the islet and acinar cells in rat pancreas.

CHROMOSOMAL LOCATION

Genetic locus: PLCB2 (human) mapping to 15q15.1; Plcb2 (mouse) mapping to 2 E5.

SOURCE

PLC β2 (H-255) is a rabbit polyclonal antibody raised against amino acids 821-1075 of PLC β2 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.

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.

APPLICATIONS

PLC β2 (H-255) is recommended for detection of PLC β2 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).

Suitable for use as control antibody for PLC β2 siRNA (h): sc-36270, PLC β2 siRNA (m): sc-36271, PLC β2 shRNA Plasmid (h): sc-36270-SH, PLC β2 shRNA Plasmid (m): sc-36271-SH, PLC β2 shRNA (h) Lentiviral Particles: sc-36270-V and PLC β2 shRNA (m) Lentiviral Particles: sc-36271-V.

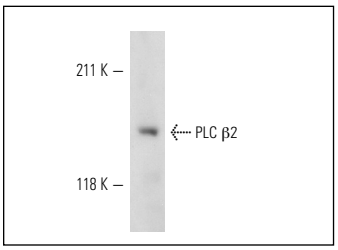
Molecular Weight of PLC β2: 140 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, HeLa whole cell lysate: sc-2200 or Ramos cell lysate: sc-2216.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PLC β2 (H-255): sc-9018. Western blot analysis of PLC β2 expression in rat PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Rakotoarisoa, L., et al. 2006. Angiotensin II-induced delayed stimulation of phospholipase C γ1 requires activation of both phosphatidylinositol 3-kinase γ and tyrosine kinase in vascular myocytes. J. Cell. Mol. Med. 10: 734-748.
2. Barbosa, H.C., et al. 2008. Islet neogenesis-associated protein signaling in neonatal pancreatic rat islets: involvement of the cholinergic pathway. J. Endocrinol. 199: 299-306.
3. Ribeiro, R.A., et al. 2010. Taurine supplementation: involvement of cholinergic/phospholipase C and protein kinase A pathways in potentiation of Insulin secretion and Ca^{2+} handling in mouse pancreatic islets. Br. J. Nutr. 104: 1148-1155.

PROTOCOLS

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