SANTA CRUZ BIOTECHNOLOGY, INC.

PLC ε (N-20): sc-28402

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, PLCγ1, PLCγ2, PLC δ1, PLC δ2 and PLC ε). Phospholipase Cε (PLC ε) is characterized by possession of CDC25homology and Ras/Rap1-associating domains. PLC ε is translocated from the cytoplasm to the plasma membrane and activated by direct association with Ras at its Ras/Rap1-associating domain.

REFERENCES

1. Rhee, S.G., et al. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. J. Biol. Chem. 267: 12393-12396.
2. Kelley, G.G., et al. 2001. Phospholipase Cε: a novel Ras effector. EMBO J. 20: 743-754.
3. Jin, T.G., et al. 2001. Role of the CDC25 homology domain of phospholipase Cε in amplification of Rap1-dependent signaling. J. Biol. Chem. 276: 30301-30307.
4. Wing, M.R., et al. 2001. Activation of phospholipase C-ε by heterotrimeric G protein βγ-subunits. J. Biol. Chem. 276: 48257-48261.
5. Song, C., et al. 2002. Differential roles of Ras and Rap1 in growth factor-dependent activation of phospholipase C ε. Oncogene 21: 8105-8113.
6. Wu, D., et al. 2003. Neuronal lineage-specific induction of phospholipase Cε expression in the developing mouse brain. Eur. J. Neurosci. 17: 1571-1580.

CHROMOSOMAL LOCATION

Genetic locus: PLCE1 (human) mapping to 10q23.33; Plce1 (mouse) mapping to 19 C3.

SOURCE

PLC ε (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PLC ε of mouse 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-28402 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.

PROTOCOLS

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

APPLICATIONS

PLC ε (N-20) is recommended for detection of PLC ε of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

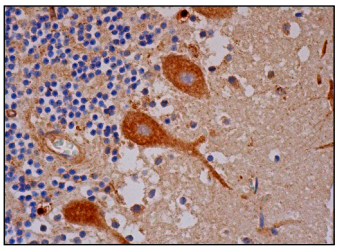
PLC ε (N-20) is also recommended for detection of PLC ε in additional species, including equine.

Suitable for use as control antibody for PLC ε siRNA (h): sc-44024, PLC ε siRNA (m): sc-152295, PLC ε siRNA (r): sc-270253, PLC ε shRNA Plasmid (h): sc-44024-SH, PLC ε shRNA Plasmid (m): sc-152295-SH, PLC ε shRNA Plasmid (r): sc-270253-SH, PLC ε shRNA (h) Lentiviral Particles: sc-44024-V, PLC ε shRNA (m) Lentiviral Particles: sc-152295-V and PLC ε shRNA (r) Lentiviral Particles: sc-270253-V.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PLC ε (N-20): sc-28402. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in granular and molecular layers.

SELECT PRODUCT CITATIONS

1. Xiao, W., et al. 2010. Lyn- and PLC-β3-dependent regulation of SHP-1 phosphorylation controls Stat5 activity and myelomonocytic leukemia-like disease. Blood 116: 6003-6013.

RESEARCH USE

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