

PLC ϵ (C-18): sc-28404

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 β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1, PLC δ 2 and PLC ϵ . Phospholipase C ϵ (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

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2. Kelley, G.G., et al. 2001. Phospholipase C ϵ : a novel Ras effector. *EMBO J.* 20: 743-754.
3. Jin, T.G., et al. 2001. Role of the CDC25 homology domain of phospholipase C ϵ 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 $\beta\gamma$ -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 C ϵ expression in the developing mouse brain. *Eur. J. Neurosci.* 17: 1571-1580.
7. Wing, M.R., et al. 2003. Direct activation of phospholipase C- ϵ by Rho. *J. Biol. Chem.* 278: 41253-41258.
8. Wing, M.R., et al. 2003. PLC- ϵ : a shared effector protein in Ras-, Rho-, and G $\alpha\beta\gamma$ -mediated signaling. *Mol. Interv.* 3: 273-280.

CHROMOSOMAL LOCATION

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

SOURCE

PLC ϵ (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PLC ϵ of mouse 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-28404 P, (100 μ g 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 ϵ (C-18) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PLC ϵ (C-18) is also recommended for detection of PLC ϵ in additional species, including equine, canine, bovine and avian.

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

Molecular Weight of PLC ϵ : 255 kDa.

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.

SELECT PRODUCT CITATIONS

1. Heeringa, S.F., et al. 2011. COQ6 mutations in human patients produce nephrotic syndrome with sensorineural deafness. *J. Clin. Invest.* 121: 2013-2024.

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.