SANTA CRUZ BIOTECHNOLOGY, INC.

PLC-L (V-20): sc-17025

SANTA CRUZ BIOTECHNOLOGY

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 nine mammalian PLC isozymes have been described. PLC-L (for PLC-deleted in lung carcinoma) is a PLC family memeber, the expression of which is decreased in small cell lung carcinomas. PLC-L is normally expressed in a variety of fetal and adult organs including the lung. PLC-L is thought to be involved in inositol phospholipid-based intracellular signaling cascade and aberrant expression of PLC-L may contributes to the genesis or progression of human lung carcinoma.

REFERENCES

1. Suh, P., et al. 1988. Inositol phospholipid-specific phospholipase C: complete cDNA and protein sequences and sequence homology to tyrosine kinase-related oncogene products. Proc. Natl. Acad. Sci. USA 85: 5419-5423.
2. Emori, Y., et al. 1989. A second type of rat phosphoinositide-specific phospholipase C containing a Src-related sequence not essential for phosphoinositide-hydrolyzing activity. J. Biol. Chem. 264: 21885-21890.
3. Meldrum, E., et al. 1991. A second gene product of the inositol-phospholipid-specific phospholipase Cδ subclass. Eur. J. Biochem. 196: 159-165.
4. Rhee, S.G., et al. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. J. Biol. Chem. 267: 12393-12396.
5. Kim, M.J., et al. 1993. Cloning of cDNA encoding rat phospholipase C-β4, a new member of the phospholipase C. Biochem. Biophys. Res. Comm. 194: 706-712.
6. Jhon, D., et al. 1993. Cloning, sequencing, purification and G_q-dependent activation of phospholipase C-β3. J. Biol. Chem. 268: 6654-6661
7. Kohno, T., et al. 1995. Identification of a novel phospholipase C family gene at chromosome 2q33 that is homozygously deleted in human small cell lung carcinoma. Hum. Mol. Genet. 4: 667-674.
8. Kelly, G.G., et al. 2001. Phospholipase Cε: a novel Ras effector. EMBO J. 20: 743-754.

CHROMOSOMAL LOCATION

Genetic locus: PLCL1 (human) mapping to 2q33.1; Plcl1 (mouse) mapping to 1 C1.2.

SOURCE

PLC-L (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLC-L 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-17025 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PLC-L (V-20) is recommended for detection of PLC-L 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-L (V-20) is also recommended for detection of PLC-L in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLC-L siRNA (h): sc-40845, PLC-L siRNA (m): sc-40846, PLC-L shRNA Plasmid (h): sc-40845-SH, PLC-L shRNA Plasmid (m): sc-40846-SH, PLC-L shRNA (h) Lentiviral Particles: sc-40845-V and PLC-L shRNA (m) Lentiviral Particles: sc-40846-V.

Molecular Weight of PLC-L: 130 kDa.

Positive Controls: Mouse cerebellum extract: sc-2403 or rat brain extract: sc-2392.

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. Lad, Y., et al. 2006. Phospholipase C ε suppresses integrin activation. J. Biol. Chem. 281: 29501-29512.

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.

PROTOCOLS

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