SANTA CRUZ BIOTECHNOLOGY, INC.

PLC-L (D-5): sc-28328

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 with molecular weights ranging from 85 to 255 kDa. 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. Commun. 194: 706-712.

CHROMOSOMAL LOCATION

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

SOURCE

PLC-L (D-5) is a mouse monoclonal antibody raised against amino acids 121-185 of PLC-L of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PLC-L (D-5) is available conjugated to agarose (sc-28328 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28328 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28328 PE), fluorescein (sc-28328 FITC), Alexa Fluor® 488 (sc-28328 AF488), Alexa Fluor® 546 (sc-28328 AF546), Alexa Fluor® 594 (sc-28328 AF594) or Alexa Fluor® 647 (sc-28328 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28328 AF680) or Alexa Fluor® 790 (sc-28328 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PLC-L (D-5) is recommended for detection of PLC-L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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-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.

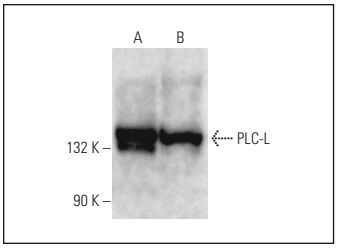
Molecular Weight of PLC-L: 130 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, mouse cerebellum extract: sc-2403 or rat brain extract: sc-2392.

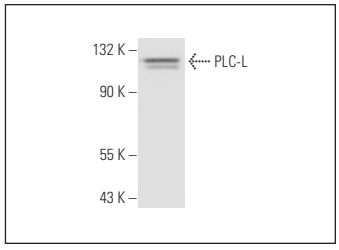
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PLC-L (D-5): sc-28328. Western blot analysis of PLC-L expression in mouse cerebellum (**A**) and rat brain (**B**) tissue extracts.



PLC-L (D-5): sc-28328. Western blot analysis of PLC-L expression in Jurkat whole cell lysate.

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 for detailed protocols and support products.