

PC-PLD3 (V-14): sc-161996

BACKGROUND

Virtually every cell uses phosphatidylcholine as a substrate to produce phosphatidic acid and choline. Phosphatidylcholine phospholipase D1, D2, D3, D4 and D5 (PC-PLD1-5) are phospholipid-specific phosphodiesterases that hydrolyze phosphatidylcholine to produce choline. PC-PLD activity in mammalian cells is transiently stimulated upon activation by G protein-coupled and receptor tyrosine kinase cell surface receptors. Both PC-PLD1 (which associates with secretory granules) and PC-PLD2 (which localizes to the plasma membrane) regulate macrophage phagocytosis and, through repression of p21, stimulate cell growth. PC-PLD3 localizes to the membrane of the endoplasmic reticulum (ER) and is thought to be highly expressed in neurons, possibly playing a role in neuronal choline production. PC-PLD4 and PC-PLD5 are both single-pass membrane proteins that localize to the membrane and contain two phosphodiesterase domains. Unlike its family members, PC-PLD5 lacks conserved active sites, suggesting that it has no phospholipase activity.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PLD3 (human) mapping to 19q13.2; Pld3 (mouse) mapping to 7 A3.

SOURCE

PC-PLD3 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PC-PLD3 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-161996 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PC-PLD3 (V-14) is recommended for detection of PC-PLD3 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); non cross-reactive with other PC-PLD family members.

PC-PLD3 (V-14) is also recommended for detection of PC-PLD3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PC-PLD3 siRNA (h): sc-97795, PC-PLD3 siRNA (m): sc-152046, PC-PLD3 shRNA Plasmid (h): sc-97795-SH, PC-PLD3 shRNA Plasmid (m): sc-152046-SH, PC-PLD3 shRNA (h) Lentiviral Particles: sc-97795-V and PC-PLD3 shRNA (m) Lentiviral Particles: sc-152046-V.

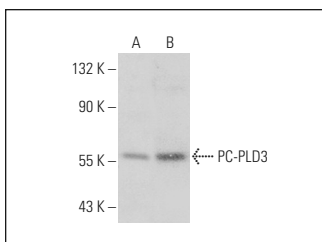
Molecular Weight of PC-PLD3: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PC-PLD3 (V-14): sc-161996. Western blot analysis of PC-PLD3 expression in A549 (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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