

p-PLC β 3 (Ser 537): sc-34392

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 eight mammalian PLC isozymes have been described (PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1 and PLC δ 2). The γ -type enzymes are unique in that they contain SH2 and SH3 domains. Moreover, the two γ -type enzymes, but not the β and δ isozymes, are subject to activation by a number of protein tyrosine kinases which associate with their SH2 domains and induce their activation by phosphorylation. In contrast, activation of PLC β 1, PLC β 2 and PLC β 3 is mediated by the α subunits of the G_q class of heterotrimeric G proteins and by certain $\beta\gamma$ G protein subunits. PLC β 3 is phosphorylated on Ser 537 in the basal state in cells, and this phosphorylation is enhanced by ionomycin. PLC β 3 is also exclusively phosphorylated on Ser 537 in the X-Y linker region by CaMK II.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PLCB3 (human) mapping to 11q13.1; Plcb3 (mouse) mapping to 19 A.

SOURCE

p-PLC β 3 (Ser 537) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 537 phosphorylated PLC β 3 of human origin.

PRODUCT

Each vial contains 100 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-34392 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PLC β 3 (Ser 537) is recommended for detection of PLC β 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

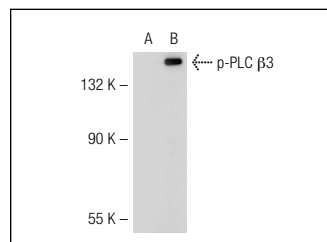
p-PLC β 3 (Ser 537) is also recommended for detection of correspondingly phosphorylated PLC β 3 in additional species, including equine and porcine.

Suitable for use as control antibody for PLC β 3 siRNA (h): sc-36272, PLC β 3 siRNA (m): sc-36273, PLC β 3 shRNA Plasmid (h): sc-36272-SH, PLC β 3 shRNA Plasmid (m): sc-36273-SH, PLC β 3 shRNA (h) Lentiviral Particles: sc-36272-V and PLC β 3 shRNA (m) Lentiviral Particles: sc-36273-V.

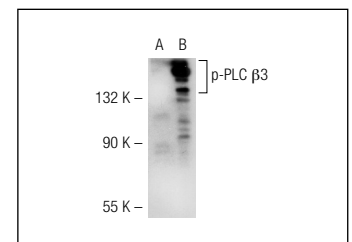
Molecular Weight of p-PLC β 3: 152 kDa.

Positive Controls: PLC β 3 (m): 293T Lysate: sc-122623 or PLC β 3 (h): 293T Lysate: sc-112691.

DATA



p-PLC β 3 (Ser 537): sc-34392. Western blot analysis of PLC β 3 phosphorylation in non-transfected: sc-117752 (A) and human PLC β 3 transfected: sc-112691 (B) 293T whole cell lysates.



p-PLC β 3 (Ser 537): sc-34392. Western blot analysis of PLC β 3 phosphorylation in non-transfected: sc-117752 (A) and mouse PLC β 3 transfected: sc-122623 (B) 293T whole cell lysates.

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.