**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-trisphosphate and diacylglycerol from phosphatidylinositol 4,5-bisphosphate. A total of eight mammalian PLC isozymes have been described (PLC β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC δ1 and PLC δ2). 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 β1, PLC β2 and PLC β3 is mediated by the ε subunits of the Gq class of heterotrimeric G proteins and by certain βγ G protein subunits. The regulatory mechanisms for PLC δ1 and PLC δ2 are not yet resolved.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

PLC β3 (D-7) is a mouse monoclonal antibody raised against amino acids 1151-1234 of PLC β3 of human origin.

**PRODUCT**

Each vial contains 200 μg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PLC β3 (D-7) is available conjugated to agarose (sc-133231 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133231 HRP), 200 μg/ml, for WB, HRP(II) and ELISA; or to either phosphoryrythrin (sc-133231 PE), fluorescein (sc-133231 FITC), Alexa Fluor® 488 (sc-133231 AF488), Alexa Fluor® 546 (sc-133231 AF546), Alexa Fluor® 594 (sc-133231 AF594) or Alexa Fluor® 647 (sc-133231 AF647), 200 μg/ml, for WB (RGB), IF, HRP(II) and FCM; and to either Alexa Fluor® 680 (sc-133231 AF680) or Alexa Fluor® 790 (sc-133231 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

PLC β3 (D-7) is recommended for detection of PLC β3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 β3 siRNA (h): sc-36272, PLC β3 siRNA (r): sc-156124, PLC β3 shRNA Plasmid (h): sc-36272-SH, PLC β3 shRNA Plasmid (m): sc-36273-SH, PLC β3 shRNA Plasmid (r): sc-156124-SH, PLC β3 shRNA (h) Lentiviral Particles: sc-36272-V, PLC β3 shRNA (m) Lentiviral Particles: sc-36272-V and PLC β3 shRNA (r) Lentiviral Particles: sc-156124-V.

Molecular Weight of PLC β3: 152 kDa.

**DATA**

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

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.