PLC β2 (B-2): sc-515912

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a crucial 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. There are many mammalian PLC isoforms, including PLC β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC δ1, PLC α2 and PLCε). PLC βs are the only PLC isforms that are regulated by G protein subunits and are activated by a heterotrimeric GTP-binding protein linked to various cell surface receptors. Two alternatively spliced forms (1,181 and 1,166 amino acids) of PLC β2 are generated in hematopoietic cells that differ in the carboxyl terminal sequence implicated in interaction of PLC β enzymes with Gαs. The pleckstrin homology domain of PLC β2 is required for its targeting to the membrane and for substrate hydrolysis and its linker region exerts an inhibitory effect on basal PLC β2 activity. PLC β2 plays a major role in platelet activation and is mainly expressed in the periphery of the islet and acinar cells in rat pancreas.

CHROMOSOMAL LOCATION

Genetic locus: PLCB2 (human) mapping to 15q15.1; Plcb2 (mouse) mapping to 1138-1151.

SOURCE

PLC β2 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 794-818 within an internal region of PLC β2 of human origin.

PRODUCT

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

PLC β2 (B-2) is available conjugated to agarose (sc-515912 AC), 500 µg/ml agarose in 1 ml, for IP; to HRP (sc-515912 HRP), 200 µg/ml, for WB, IHC/IP and ELISA; to either phycoerythrin (sc-515912 PE), fluorescein (sc-515912 FITC), Alexa Fluor® 488 (sc-515912 AF488), Alexa Fluor® 546 (sc-515912 AF546), Alexa Fluor® 594 (sc-515912 AF594) or Alexa Fluor® 647 (sc-515912 AF647), 200 µg/ml, for WB (RGB), IF, IHC/IP and FCM; and to either Alexa Fluor® 680 (sc-515912 AF680) or Alexa Fluor® 790 (sc-515912 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PLC β2 (B-2) is recommended for detection of PLC β2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PLC β2 siRNA (h): sc-36270. PLC β2 siRNA (m) : sc-36271, PLC β2 shRNA Plasmid (h): sc-36270-SH, PLC β2 shRNA Plasmid (m): sc-36271-SH, PLC β2 shRNA (h) Lentiviral Particles: sc-36270-V and PLC β2 shRNA (m) Lentiviral Particles: sc-36271-V.

Molecular Weight of PLC β2: 140 kDa.

RECOMMENDED SUPPORT 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 MarkerTM 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

![Western blot analysis of PLC β2 expression in RAW 264.7](image1)

![Western blot analysis of PLC β2 expression in Ramos (A), Raji (B), NAMALWA (C), Daudi (D) and WEHI-231 (E) whole cell lysates](image2)

SELECT PRODUCT CITATIONS

4. Yu, W., et al. 2020. SOX10-cere-labeled cells under the tongue epithelium serve as progenitors for taste bud cells that are mainly type III and keratin 8-low. Stem Cells Dev. 29: 638-647.

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.

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