

PLC β 2 (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 isozymes, including PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1, PLC δ 2 and PLC ϵ . PLC β s are the only PLC isoforms 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 β 2 are generated in hematopoietic cells that differ in the carboxyl terminal sequence implicated in interaction of PLC β enzymes with G $_{\alpha q}$. The pleckstrin homology domain of PLC β 2 is required for its targeting to the membrane and for substrate hydrolysis and its linker region exerts an inhibitory effect on basal PLC β 2 activity. PLC β 2 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 2 E5.

SOURCE

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

PRODUCT

Each vial contains 200 μ g IgG $_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PLC β 2 (B-2) is available conjugated to agarose (sc-515912 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515912 HRP), 200 μ g/ml, for WB, IHC(P) 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 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515912 AF680) or Alexa Fluor[®] 790 (sc-515912 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PLC β 2 (B-2) is recommended for detection of PLC β 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

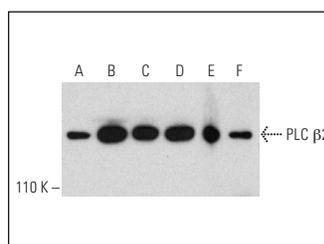
Suitable for use as control antibody for PLC β 2 siRNA (h): sc-36270, PLC β 2 siRNA (m): sc-36271, PLC β 2 shRNA Plasmid (h): sc-36270-SH, PLC β 2 shRNA Plasmid (m): sc-36271-SH, PLC β 2 shRNA (h) Lentiviral Particles: sc-36270-V and PLC β 2 shRNA (m) Lentiviral Particles: sc-36271-V.

Molecular Weight of PLC β 2: 140 kDa.

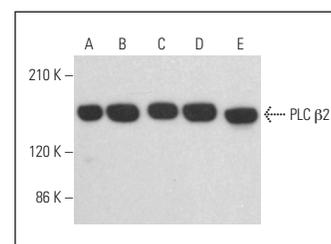
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 β 2 (B-2): sc-515912. Western blot analysis of PLC β 2 expression in RAW 264.7 (A), HeLa (B), JAR (C), THP-1 (D) and Ramos (E) whole cell lysates and rat pancreas tissue extract (F).



PLC β 2 (B-2): sc-515912. Western blot analysis of PLC β 2 expression in Ramos (A), Raji (B), NAMALWA (C), Daudi (D) and WEHI-231 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Yuan, Z., et al. 2018. Chk2 deficiency alleviates irradiation-induced taste dysfunction by inhibiting p53-dependent apoptosis. *Oral Dis.* 24: 856-863.
- Fais, P., et al. 2018. Phosphoinositide-specific phospholipase C in normal human liver and in alcohol abuse. *J. Cell. Biochem.* E-published.
- Róg, J., et al. 2019. Dystrophic mdx mouse myoblasts exhibit elevated ATP/UTP-evoked metabotropic purinergic responses and alterations in calcium signalling. *Biochim. Biophys. Acta Mol. Basis Dis.* 24 1865: 1138-1151.
- Yu, W., et al. 2020. SOX10-cre-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.
- Ozdenler, M.H., et al. 2022. Relationship between ENaC regulators and SARS-CoV-2 virus receptor (ACE2) expression in cultured adult human fungiform (HBO) taste cells. *Nutrients* 14: 2703.

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.

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