SANTA CRUZ BIOTECHNOLOGY, INC.

PITPα (5F12): sc-13569

BACKGROUND

The lipid binding proteins known as phosphatidylinositol transfer proteins (PITP) facilitate the formation of phosphatidylinositol derived second messenger molecules, which are related to the phospholipase C and phosphoinositide 3-kinase pathways. PITP are ubiquitously expressed proteins that transfer phosphatidylinositol (PI) and phosphatidylcholine (PC) between membranes enriched in PI or PC to membranes that are deficient in PI or PC. PITP mobilizes PI from the endoplasmic recticulum and regulates the release of PI from stored vesicles in the Golgi network. In mammalian cells, three smaller forms of soluble PITP are present, designated PITP α, β and retinal degeneration B (rdgB) β. The gene encoding human rdgB β maps to chromosome 11, a region that contains several retinopathy loci, which makes the H-rdgB β gene a candidate for several inherited retinal degenerative diseases.

CHROMOSOMAL LOCATION

Genetic locus: PITPNA (human) mapping to 17p13.3; Pitpna (mouse) mapping to 11 B5.

SOURCE

PITPα (5F12) is a mouse monoclonal antibody raised against native recombinant phosphatidyl inositol transfer protein (PITP) of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PITPα (5F12) is available conjugated to agarose (sc-13569 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13569 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13569 PE), fluorescein (sc-13569 FITC), Alexa Fluor® 488 (sc-13569 AF488), Alexa Fluor® 546 (sc-13569 AF546), Alexa Fluor® 594 (sc-13569 AF594) or Alexa Fluor® 647 (sc-13569 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13569 AF680) or Alexa Fluor® 790 (sc-13569 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PITPα (5F12) is recommended for detection of PITPα 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with PITPβ.

Suitable for use as control antibody for PITPα siRNA (h): sc-40855, PITPα siRNA (m): sc-40856, PITPα shRNA Plasmid (h): sc-40855-SH, PITPα shRNA Plasmid (m): sc-40856-SH, PITPα shRNA (h) Lentiviral Particles: sc-40855-V and PITPα shRNA (m) Lentiviral Particles: sc-40856-V.

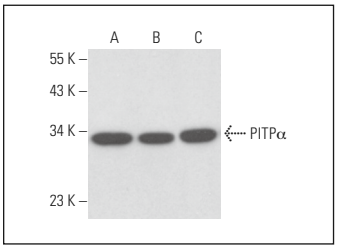
Molecular Weight of PITPα: 35 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, RAW 264.7 whole cell lysate: sc-2211 or C6 whole cell lysate: sc-364373.

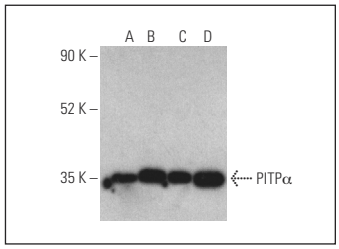
RECOMMENDED SUPPORT REAGENTS

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 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-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



PITPα (5F12): sc-13569. Western blot analysis of PITPα expression in RAW 264.7 (**A**), AMJ2-C8 (**B**) and C6 (**C**) whole cell lysates.



PITPα (5F12) HRP: sc-13569 HRP. Direct western blot analysis of PITPα expression in ECV304 (**A**), RAW 264.7 (**B**), AMJ2-C8 (**C**) and C6 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Grant, M.M., et al. 2007. Dose-dependent modulation of the T cell proteome by ascorbic acid. Br. J. Nutr. 97: 19-26.
2. Kabuyama, Y., et al. 2009. A mediator of Rho-dependent invasion moonlights as a methionine salvage enzyme. Mol. Cell. Proteomics 8: 2308-2320.
3. Griffiths, H.R., et al. 2009. *In vivo* vitamin C supplementation increases phosphoinositol transfer protein expression in peripheral blood mononuclear cells from healthy individuals. Br. J. Nutr. 101: 1432-1439.
4. Zhao, L., et al. 2017. Phosphatidylinositol transfer protein-α in platelets is inconsequential for thrombosis yet is utilized for tumor metastasis. Nat. Commun. 8: 1216.
5. Jing, L., et al. 2018. MLKL-PITPα signaling-mediated necroptosis contributes to cisplatin-triggered cell death in lung cancer A549 cells. Cancer Lett. 414: 136-146.
6. Carrillo, N.D., et al. 2025. Lipid transfer proteins and a PI 4-kinase initiate nuclear phosphoinositide signaling. bioRxiv. E-published.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.