SANTA CRUZ BIOTECHNOLOGY, INC.

PITPβ (G-3): sc-390500

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 PITPα, PITPβ and retinal degeneration B (rdgB) β. PITPβ is a 271 amino acid protein that is widely expressed in various tissues. Though required for Golgi targeting, constitutive phosphorylation of Ser 262 has no effect on phospholipid transfer activity. There are two isoforms of PITPβ that are produced as a result of alternative splicing events.

REFERENCES

1. Tanaka, S., et al. 1995. Cloning and expression of human cDNA encoding phosphatidylinositol transfer protein β. Biochim. Biophys. Acta 1259: 199-202.
2. Cockcroft, S. 1999. Mammalian phosphatidylinositol transfer proteins: emerging roles in signal transduction and vesicular traffic. Chem. Phys. Lipids 98: 23-33.
3. Segui, B., et al. 2002. Phosphatidylinositol transfer protein β displays minimal sphingomyelin transfer activity and is not required for biosynthesis and trafficking of sphingomyelin. Biochem. J. 366: 23-34.

CHROMOSOMAL LOCATION

Genetic locus: PITPNB (human) mapping to 22q12.1; Pitpnb (mouse) mapping to 5 F.

SOURCE

PITPβ (G-3) is a mouse monoclonal antibody raised against amino acids 94-163 mapping within an internal region of PITPβ 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.

PITPβ (G-3) is available conjugated to agarose (sc-390500 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390500 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390500 PE), fluorescein (sc-390500 FITC), Alexa Fluor® 488 (sc-390500 AF488), Alexa Fluor® 546 (sc-390500 AF546), Alexa Fluor® 594 (sc-390500 AF594) or Alexa Fluor® 647 (sc-390500 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390500 AF680) or Alexa Fluor® 790 (sc-390500 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

PITPβ (G-3) is recommended for detection of PITPβ 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).

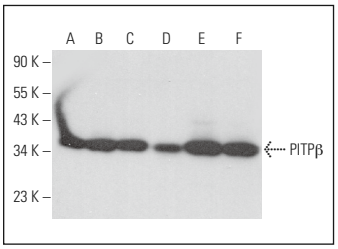
PITPβ (G-3) is also recommended for detection of PITPβ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PITPβ siRNA (h): sc-76150, PITPβ siRNA (m): sc-152278, PITPβ shRNA Plasmid (h): sc-76150-SH, PITPβ shRNA Plasmid (m): sc-152278-SH, PITPβ shRNA (h) Lentiviral Particles: sc-76150-V and PITPβ shRNA (m) Lentiviral Particles: sc-152278-V.

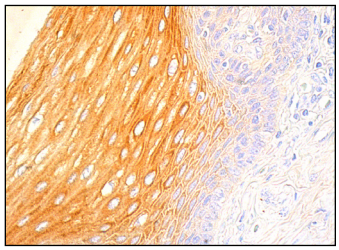
Molecular Weight of PITPβ: 36 kDa.

Positive Controls: IHL-60 whole cell lysate: sc-2209, PC-12 cell lysate: sc-2250 or C4 whole cell lysate: sc-364186.

DATA



PITPβ (G-3): sc-390500. Western blot analysis of PITPβ expression in HUV-EC-C (**A**), HL-60 (**B**), PC-12 (**C**), 3T3-L1 (**D**), C6 (**E**) and c4 (**F**) whole cell lysates.



PITPβ (G-3): sc-390500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. Carrillo, N.D., et al. 2025. Lipid transfer proteins and a PI 4-kinase initiate nuclear phosphoinositide signaling. bioRxiv. E-published.

RESEARCH USE

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

PROTOCOLS

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