SANTA CRUZ BIOTECHNOLOGY, INC.

PITPβ (A-10): sc-390607

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.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606876. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Vordtriede, P.B., et al. 2005. Structure of PITPβ in complex with phosphatidylcholine: comparison of structure and lipid transfer to other PITP isoforms. Biochemistry 44: 14760-14771.
6. Phillips, S.E., et al. 2006. Specific and nonspecific membrane-binding determinants cooperate in targeting phosphatidylinositol transfer protein β-isoform to the mammalian *trans*-Golgi network. Mol. Biol. Cell 17: 2498-2512.

CHROMOSOMAL LOCATION

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

SOURCE

PITPβ (A-10) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PITPβ (A-10) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PITPβ (A-10) 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.

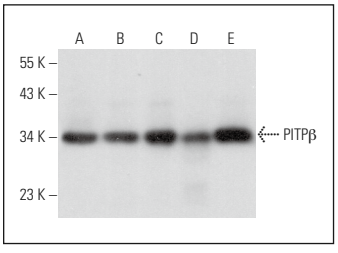
Molecular Weight of PITPβ: 36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ECV304 cell lysate: sc-2269 or IMR-32 cell lysate: sc-2409.

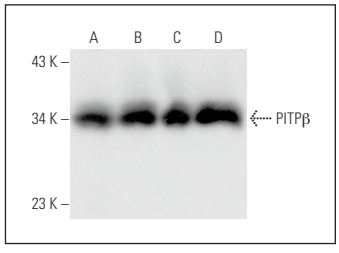
RECOMMENDED SUPPORT REAGENTS

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



PITPβ (A-10): sc-390607. Western blot analysis of PITPβ expression in HL-60 (**A**), PC-12 (**B**), C6 (**C**), 3T3-L1 (**D**) and c4 (**E**) whole cell lysates.



PITPβ (A-10): sc-390607. Western blot analysis of PITPβ expression in ECV304 (**A**), HeLa (**B**), IMR-32 (**C**) and U-251-MG (**D**) whole cell lysates.

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.