

# PITPβ (G-17): sc-86792

## 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 reticulum 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

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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.
7. Cockcroft, S. and Carvou, N. 2007. Biochemical and biological functions of class I phosphatidylinositol transfer proteins. *Biochim. Biophys. Acta* 1771: 677-691.
8. Rikova, K., et al. 2007. Global survey of phosphotyrosine signaling identifies oncogenic kinases in lung cancer. *Cell* 131: 1190-1203.
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## CHROMOSOMAL LOCATION

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

## SOURCE

PITPβ (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PITPβ of human origin.

## PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86792 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PITPβ (G-17) is recommended for detection of PITPβ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with PITPα.

PITPβ (G-17) 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, HEK293 whole cell lysate: sc-45136 or IMR-32 cell lysate: sc-2409.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.