



## PITP $\alpha/\beta$ (C-20): sc-20286

### 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 PITP  $\alpha$ ,  $\beta$  and retinal degeneration B (rdgB)  $\beta$ . The gene encoding human rdgB  $\beta$  maps to chromosome 11q13, a region that contains several retinopathy loci, which makes the H-rdgB  $\beta$  gene a candidate for several inherited retinal degenerative diseases.

### REFERENCES

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- Monaco, M.E., et al. 1998. Evidence that mammalian phosphatidylinositol transfer protein regulates phosphatidylcholine metabolism. *Biochem. J.* 335: 175-179.
- Aikawa, Y., et al. 1999. Involvement of PITPnm, a mammalian homologue of *Drosophila* rdgB, in phosphoinositide synthesis on Golgi membranes. *J. Biol. Chem.* 274: 20569-20577.
- Fullwood, Y., et al. 1999. Cloning and characterization of a novel human phosphatidylinositol transfer protein, rdgB  $\beta$ . *J. Biol. Chem.* 274: 31553-31558.
- Cockcroft, S. 1999. Mammalian phosphatidylinositol transfer proteins: emerging roles in signal transduction and vesicular traffic. *Chem. Phys. Lipids* 98: 23-33.
- Viscardi, R.M. and Strauss, K.A. 1999. Developmental changes in phosphatidylinositol transfer protein concentration and phospholipid transfer activities in rat type II cells. *Exp. Lung Res.* 25: 561-576.
- Cockcroft, S. 2001. Phosphatidylinositol transfer proteins couple lipid transport to phosphoinositide synthesis. *Semin. Cell Dev. Biol.* 12: 183-191.

### CHROMOSOMAL LOCATION

Genetic locus: PITPNB (human) mapping to 22q12.1; Pitpna (mouse) mapping to 11 B5.

### SOURCE

PITP $\alpha/\beta$  (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PITP $\alpha$  of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20286 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PITP $\alpha/\beta$  (C-20) is recommended for detection of PITP $\alpha/\beta$  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).

Molecular Weight of PITP $\alpha/\beta$ : 35 kDa.

Positive Controls: ECV304 cell lysate: sc-2269.

### 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.

### SELECT PRODUCT CITATIONS

- Krey, G., et al. 2008. *In vivo* dendritic cell depletion reduces breeding efficiency, affecting implantation and early placental development in mice. *J. Mol. Med.* 86: 999-1011.

### 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.