

PC-TP (LB-6): sc-101309

BACKGROUND

Eukaryotic cells contain phospholipid transfer proteins that act as carriers of phospholipids between membranes. In mammalian tissues three transfer proteins with different specificities have been identified: the phosphatidylcholine transfer protein (PC-TP, also known as StARD2), the phosphatidylinositol transfer protein (PI-TP) and the non-specific lipid transfer protein (nsL-TP) that transfers all common diacyl-phospholipids and cholesterol. PC-TP is a cytosolic protein first purified from bovine and rat liver that catalyzes intermembrane transfer of PC. The highest expression of PC-TP is found in liver, placenta, testis, kidney and heart, and lowest levels are found in brain and lung tissues. PC-TP knockout mice showed no defects in the secretion of PC into bile or lung surfactant, and the lipid content and composition of bile and surfactant was normal. The authors concluded that PC-TP does not play a major role in transporting PC from the endoplasmic reticulum, where it is synthesized, to the hepatocyte canalicular membrane. The gene which encodes PC-TP maps to human chromosome 17q22.

REFERENCES

1. Wirtz, K.W. 1991. Phospholipid transfer proteins: from lipid monolayers to cells. *Klin. Wochenschr.* 69: 105-111.
2. Cohen, D.E., Green, R.M., Wu, M.K. and Beier, D.R. 1999. Cloning, tissue-specific expression, gene structure and chromosomal localization of human phosphatidylcholine transfer protein. *Biochim. Biophys. Acta* 1447: 265-270.
3. van Helvoort, A., de Brouwer, A., Ottenhoff, R., Brouwers, J.F., Wijnholds, J., Beijnen, J.H., Rijnveld, A., van der Poll, T., van der Valk, M.A., Majoor, D., Voorhout, W., Wirtz, K.W., Elferink, R.P. and Borst, P. 1999. Mice without phosphatidylcholine transfer protein have no defects in the secretion of phosphatidylcholine into bile or into lung airspaces. *Proc. Natl. Acad. Sci. USA* 96: 11501-11506.
4. de Brouwer, A.P., Versluis, C., Westerman, J., Roelofsen, B., Heck, A.J. and Wirtz, K.W. 2002. Determination of the stability of the noncovalent phospholipid transfer protein-lipid complex by electrospray time-of-flight mass spectrometry. *Biochemistry* 41: 8013-8018.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606055. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PCTP (human) mapping to 17q22.

SOURCE

PC-TP (LB-6) is a mouse monoclonal antibody raised against recombinant PC-TP of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

PC-TP (LB-6) is recommended for detection of PC-TP of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PC-TP siRNA (h): sc-41363, PC-TP shRNA Plasmid (h): sc-41363-SH and PC-TP shRNA (h) Lentiviral Particles: sc-41363-V.

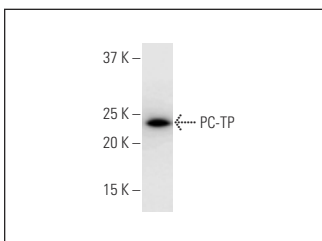
Molecular Weight of PC-TP: 25 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, JAR cell lysate: sc-2276 or K-562 whole cell lysate: sc-2203.

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).

DATA



PC-TP (LB-6): sc-101309. Western blot analysis of PC-TP expression in K-562 whole cell lysate.

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.