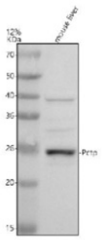
PCTP Antibody / Phosphatidylcholine transfer protein (FY13378)

Catalog No.	Formulation	Size
FY13378	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P53808
Applications	Western Blot: 0.25-0.5ug/ml
Limitations	This PCTP antibody is available for research use only.



Western blot analysis of PCTP using anti-PCTP antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: mouse liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PCTP antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of PCTP is ~25 kDa.

Description

PCTP antibody detects Phosphatidylcholine transfer protein, a lipid transport protein encoded by the PCTP gene on chromosome 17q11.2. PCTP belongs to the START (steroidogenic acute regulatory protein-related lipid transfer) domain family and is responsible for the intermembrane transfer of phosphatidylcholine, a major phospholipid component of cell membranes. PCTP is highly expressed in liver, macrophages, and skeletal muscle, where it contributes to lipid trafficking, membrane homeostasis, and metabolic regulation. It plays a key role in coordinating lipid transport with energy

metabolism, particularly during fasting and lipid oxidation processes.

Structurally, PCTP is a small soluble protein containing a single START domain that forms a hydrophobic cavity for phosphatidylcholine binding. This structure allows PCTP to shuttle phospholipids between intracellular membranes, supporting membrane biogenesis and lipid signaling. It belongs to the phospholipid transfer protein family, which includes STARD2 and STARD10, and interacts with nuclear receptors such as PPAR and LXR that regulate lipid metabolism. Co-localization studies show PCTP distributed in the cytosol and associated with mitochondria and the endoplasmic reticulum.

Functionally, PCTP regulates phospholipid exchange and metabolic signaling. By transferring phosphatidylcholine between membranes, it maintains lipid composition and supports vesicular transport. PCTP also modulates the activity of thioesterase superfamily member THEM2, linking phospholipid transfer to fatty acid oxidation. In macrophages, it influences cholesterol efflux and inflammatory responses, while in hepatocytes, it contributes to VLDL assembly and secretion. PCTP participates in lipid signaling pathways that regulate glucose metabolism, energy storage, and membrane trafficking.

Altered expression of PCTP has been associated with metabolic and cardiovascular diseases. Overexpression promotes lipid accumulation and insulin resistance, while deficiency enhances fatty acid oxidation and improves glucose tolerance. Pathway involvement includes phospholipid transport, lipid metabolism, and mitochondrial energy regulation. Expression of PCTP increases during metabolic stress and fasting, reflecting its role in adaptive lipid handling.

The PCTP antibody from NSJ Bioreagents is a reliable reagent for investigating phospholipid metabolism, intracellular transport, and metabolic regulation.

Application Notes

Optimal dilution of the PCTP antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of mouse PCTP was used as the immunogen for the PCTP antibody.

Storage

After reconstitution, the PCTP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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