SANTA CRUZ BIOTECHNOLOGY, INC.

PLTP (N-17): sc-30835

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phospholipid transfer protein (PLTP) is involved in reverse cholesterol transport, a key means of removal of excess cholesterol from cellular membranes for transport to the liver and subsequent secretion into the bile. PLTP remodels HDL by promoting net transfer and exchange of phospholipids among HDL subclasses and other lipoproteins. PLTP is secreted and distributed widely in various tissues including placenta, kidney, liver and brain. At least two transcript variants encoding different isoforms have been found for this gene. Protein secretion of active PLTP is observable in neurons, microglia, and astrocytes in culture. PLTP is present in neurons, astrocytes, microglia, and oligodendroglia.

REFERENCES

1. Karkkainen, M., et al. 2002. Isolation and partial characterization of the inactive and active forms of human plasma phospholipid transfer protein (PLTP). J. Biol. Chem. 277: 15413-15418.
2. Lee M., et al. 2003. Degradation of phospholipid transfer protein (PLTP) and PLTP-generated pre-β-high density lipoprotein by mast cell chymase impairs high affinity efflux of cholesterol from macrophage foam cells. J. Biol. Chem. 278: 13539-13545.
3. Vuletic, S., et al. 2003. Widespread distribution of PLTP in human CNS: evidence for PLTP synthesis by glia and neurons, and increased levels in Alzheimer's disease. J. Lipid Res. 44: 1113-1123.
4. Siggins, S., et al. 2003. PLTP secreted by Hep G_2 cells resembles the high-activity PLTP form in human plasma. J. Lipid Res. 44: 1698-1704.
5. Yan, D., et al. 2004. PLTP deficiency improves the anti-inflammatory properties of HDL and reduces the ability of LDL to induce monocyte chemotactic activity. J. Lipid Res. 45: 1852-1858.
6. Desrumaux, C., et al. 2005. Phospholipid transfer protein (PLTP) deficiency reduces brain vitamin E content and increases anxiety in mice. FASEB J. 19: 296-297.
7. SWISS-PROT/TrEMBL (P55058). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: PLTP (human) mapping to 20q13.12; Pltp (mouse) mapping to 2 H3.

SOURCE

PLTP (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PLTP 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-30835 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PLTP (N-17) is recommended for detection of precursor and mature forms of isoforms 1 and 2 of PLTP 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).

PLTP (N-17) is also recommended for detection of precursor and mature forms of isoforms 1 and 2 of PLTP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PLTP siRNA (h): sc-106813, PLTP siRNA (m): sc-152342, PLTP shRNA Plasmid (h): sc-106813-SH, PLTP shRNA Plasmid (m): sc-152342-SH, PLTP shRNA (h) Lentiviral Particles: sc-106813-V and PLTP shRNA (m) Lentiviral Particles: sc-152342-V.

Molecular Weight of PLTP: 80 kDa.

Positive Controls: Mouse liver extract: sc-2256, rat liver extract: sc-2395 or HeLa nuclear extract: sc-2120.

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 or our catalog for detailed protocols and support products.