

PLRP1 (N-15): sc-74850

BACKGROUND

Pancreatic lipase plays a major role in dietary lipid degradation by hydrolyzing triglycerides into diglycerides and subsequently into monoglycerides and free fatty acids. Pancreatic lipase-related protein 1 (PLRP1), also known as PNLIPRP1, is a 467 amino acid protein belonging to the AB hydrolase superfamily and the lipase family. PLRP1 has a 68% amino acid identity with Pancreatic Lipase and 18-34% identity with Gastric Lipase, Hepatic Lipase and LPL. As a secretory protein, PLRP1 is expressed solely in the pancreas. Although PLRP1 is suggested to play a role in lipid degradation, it may have a different substrate and cofactor requirements than Pancreatic Lipase. Three isoforms of PLRP1 exist as a result of alternative splicing events.

REFERENCES

- Giller, T., et al. 1992. Two novel human Pancreatic Lipase related proteins, hPLRP1 and hPLRP2. Differences in colipase dependence and in lipase activity. *J. Biol. Chem.* 267: 16509-16516.
- De Caro, J., et al. 1998. Pancreatic Lipase-related protein 1 (PLRP1) is present in the pancreatic juice of several species. *Biochim. Biophys. Acta* 1387: 331-341.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604422. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Remington, S.G. and Nelson, J.D. 2002. mRNA encoding a new lipolytic enzyme expressed in rabbit lacrimal glands. *Invest. Ophthalmol. Vis. Sci.* 43: 3617-3624.
- Reboul, E., et al 2006. Pancreatic Lipase and Pancreatic Lipase-related protein 2, but not Pancreatic Lipase-related protein 1, hydrolyze retinyl palmitate in physiological conditions. *Biochim. Biophys. Acta* 1761: 4-10.
- Elinson, N., et al. 2006. Leptin directly regulates exocrine pancreas lipase and two related proteins in the rat. *Br. J. Nutr.* 96: 691-696.
- Aloulou, A., et al. 2006. Constitutive expression of human Pancreatic Lipase-related protein 1 in *Pichia pastoris*. *Protein Expr. Purif.* 47: 415-421.
- De Caro, J., et al. 2008. Occurrence of Pancreatic Lipase-related protein-2 in various species and its relationship with herbivore diet. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 150: 1-9.
- Kim, K.S., et al. 2008. Pancreatic Lipase-related protein (PY-PLRP) highly expressed in the vitellogenic ovary of the scallop, *Patinopecten yessoensis*. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 151: 52-58.

CHROMOSOMAL LOCATION

Genetic locus: PNLIPRP1 (human) mapping to 10q25.3; Pnliprp1 (mouse) mapping to 19 D2.

STORAGE

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

SOURCE

PLRP1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PLRP1 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-74850 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PLRP1 (N-15) is recommended for detection of PLRP1 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).

PLRP1 (N-15) is also recommended for detection of PLRP1 in additional species, including canine.

Suitable for use as control antibody for PLRP1 siRNA (h): sc-76172, PLRP1 siRNA (m): sc-76173, PLRP1 shRNA Plasmid (h): sc-76172-SH, PLRP1 shRNA Plasmid (m): sc-76173-SH, PLRP1 shRNA (h) Lentiviral Particles: sc-76172-V and PLRP1 shRNA (m) Lentiviral Particles: sc-76173-V.

Molecular Weight of PLRP1: 52 kDa.

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.

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.