SANTA CRUZ BIOTECHNOLOGY, INC.

PLRP1 (I-16): sc-74849



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 secretary 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.
- 7. Aloulou, A., et al. 2006. Constitutive expression of human Pancreatic Lipaserelated protein 1 in *Pichia pastoris*. Protein Expr. Purif. 47: 415-421.
- 8. 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 (mouse) mapping to 19 D2.

SOURCE

PLRP1 (I-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLRP1 of mouse origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74849 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PLRP1 (I-16) is recommended for detection of PLRP1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

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

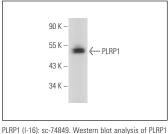
Molecular Weight of PLRP1: 52 kDa.

Positive Controls: mouse pancreas extract: sc-364244.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PLRP1 (I-16): sc-74849. Western blot analysis of PLR expression in mouse pancreas tissue extract.

STORAGE

Store at 4° C, **D0 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 or our catalog for detailed protocols and support products.