SANTA CRUZ BIOTECHNOLOGY, INC.

PLRP2 (M-58): sc-98812

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pancreatic lipase (PNLIP), also designated pancreatic triacylglycerol acylhydrolase, is important for dietary fat absorption, as it hydrolyses triglycerides into diglycerides, monoglycerides and free fatty acids. Pancreatic lipase-related protein 2 (PLRP2) is a 469 amino acid protein with 65% amino acid identity with pancreatic lipase. Similar to pancreatic lipase, PLRP2 is believed to have lipolytic activity that is inhibited by the lipase inhibitor orlistat. PLRP2 catalyzes the reaction of triacylglycerol and water to form diacylglycerol and a carboxylate. Expressed in the pancreas, PLRP2 is a secreted protein that contains one PLAT domain which is thought to be involved in protein-lipid interactions.

REFERENCES

1. Giller, T., Buchwald, P., Blum-Kaelin, D. and Hunziker, W. 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.
2. Sias, B., Ferrato, F., Grandval, P., Lafont, D., Boullanger, P., De Caro, A., Leboeuf, B., Verger, R. and Carrière, F. 2004. Human pancreatic lipase-related protein 2 is a galactolipase. Biochemistry 43: 10138-10148.
3. Eydoux, C., Aloulou, A., De Caro, J., Grandval, P., Laugier, R., Carrière, F. and De Caro, A. 2006. Human pancreatic lipase-related protein 2: tissular localization along the digestive tract and quantification in pancreatic juice using a specific ELISA. Biochim. Biophys. Acta 1760: 1497-1504.
4. Reboul, E., Berton, A., Moussa, M., Kreuzer, C., Crenon, I. and Borel, P. 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.
5. Elinson, N., Amichay, D. and Birk, R.Z. 2006. Leptin directly regulates exocrine pancreas lipase and two related proteins in the rat. Br. J. Nutr. 96: 691-696.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 604423. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Aoki, J., Inoue, A., Makide, K., Saiki, N. and Arai, H. 2007. Structure and function of extracellular phospholipase A1 belonging to the pancreatic lipase gene family. Biochimie 89: 197-204.
8. Eydoux, C., De Caro, J., Ferrato, F., Boullanger, P., Lafont, D., Laugier, R., Carrière, F. and De Caro, A. 2007. Further biochemical characterization of human pancreatic lipase-related protein 2 expressed in yeast cells. J. Lipid Res. 48: 1539-1549.
9. Eydoux, C., Spinelli, S., Davis, T.L., Walker, J.R., Seitova, A., Dhe-Paganon, S., De Caro, A., Cambillau, C. and Carrière, F. 2008. Structure of human pancreatic lipase-related protein 2 with the lid in an open conformation. Biochemistry 47: 9553-9564.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: Pnliprp2 (mouse) mapping to 19 D2.

SOURCE

PLRP2 (M-58) is a rabbit polyclonal antibody raised against amino acids 13-70 mapping near the N-terminus of PLRP2 of mouse origin.

PRODUCT

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

APPLICATIONS

PLRP2 (M-58) is recommended for detection of PLRP2 of mouse and rat 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)], 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 PLRP2 siRNA (m): sc-76175, PLRP2 shRNA Plasmid (m): sc-76175-SH and PLRP2 shRNA (m) Lentiviral Particles: sc-76175-V

Molecular Weight of PLRP2: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.