SANTA CRUZ BIOTECHNOLOGY, INC.

Pancreatic Lipase (A-2): sc-393085

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The lipase gene family belongs to one of the most robust genetic superfamilies found in living organisms, which includes esterases and thioesterases. Members of the AB hydrolase subfamily include Hepatic Hipase (HL), Endothelial Lipase (EL), Lipoprotein Lipase (LPL), Pancreatic Lipase (PL), Gastric Lipase (GL) and LCAT. These family members play a crucial role in the metabolism of lipids. Pancreatic Lipase, also designated pancreatic triacylglycerol acyl hydrolase, is important for dietary fat absorption as it hydrolyses triglycerides into diglycerides, monoglycerides and free fatty acids.

REFERENCES

1. Lowe, M.E., et al. 1989. Cloning and characterization of human Pancreatic Lipase cDNA. J. Biol. Chem. 264: 20042-20048.
2. Winkler, F.K., et al. 1990. Structure of human Pancreatic Lipase. Nature 343: 771-774.
3. Yajima, H., et al. 2005. Prevention of diet-induced obesity by dietary isomerized hop extract containing isohumulones, in rodents. Int. J. Obes. 29: 991-997.
4. Han, L.K., et al. 2005. Anti-obesity effects of chikusetsusaponins isolated from *Panax japonicus* rhizomes. BMC Complement. Altern. Med. 5: 9.
5. Bijvelds, M.J., et al. 2005. Fat absorption in cystic fibrosis mice is impeded by defective lipolysis and post-lipolytic events. Am. J. Physiol. Gastrointest. Liver Physiol. 288: G646-G653.
6. Pappan, K.L., et al. 2005. Pancreatic β-cell lipoprotein lipase independently regulates islet glucose metabolism and normal Insulin secretion. J. Biol. Chem. 280: 9023-9029.
7. Sharma, N., et al. 2005. Screening of some medicinal plants for anti-lipase activity. J. Ethnopharmacol. 97: 453-456.

CHROMOSOMAL LOCATION

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

SOURCE

Pancreatic Lipase (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 26-47 near the N-terminus of Pancreatic Lipase of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pancreatic Lipase (A-2) is available conjugated to either Alexa Fluor® 488 (sc-393085 AF488), Alexa Fluor® 546 (sc-393085 AF546) or Alexa Fluor® 594 (sc-393085 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-393085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pancreatic Lipase (A-2) is recommended for detection of Pancreatic Lipase of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 Pancreatic Lipase siRNA (m): sc-61286, Pancreatic Lipase shRNA Plasmid (m): sc-61286-SH and Pancreatic Lipase shRNA (m) Lentiviral Particles: sc-61286-V.

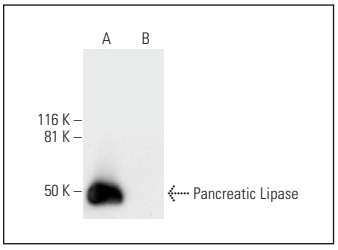
Molecular Weight of Pancreatic Lipase: 51 kDa.

Positive Controls: rat pancreas extract: sc-364806 or mouse pancreas extract: sc-364244.

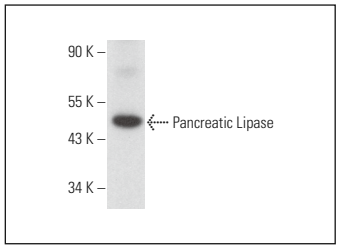
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pancreatic Lipase (A-2): sc-393085. Western blot analysis of Pancreatic Lipase expression in rat pancreas (**A**) and human pancreas (**B**) tissue extracts. Note lack of reactivity with human Pancreatic Lipase in lane **B**.



Pancreatic Lipase (A-2): sc-393085. Western blot analysis of Pancreatic Lipase expression in mouse pancreas tissue extract.

SELECT PRODUCT CITATIONS

1. Sakamuri, S.S.V.P., et al. 2017. Absence of tissue inhibitor of metalloproteinase-4 (TIMP4) ameliorates high fat diet-induced obesity in mice due to defective lipid absorption. Sci. Rep. 7: 6210.

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.