SANTA CRUZ BIOTECHNOLOGY, INC.

Pancreatic Lipase (A-3): sc-374612

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 lipase (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.

CHROMOSOMAL LOCATION

Genetic locus: PNLIP/PNLIPRP1/PNLIPRP2 (human) mapping to 10q25.3; Pnlip/Pnliprp1/Pnliprp2 (mouse) mapping to 19 D2.

SOURCE

Pancreatic Lipase (A-3) is a mouse monoclonal antibody raised against amino acids 260-300 mapping within an internal region of Pancreatic Lipase of human 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-3) is available conjugated to agarose (sc-374612 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374612 PE), fluorescein (sc-374612 FITC), Alexa Fluor® 488 (sc-374612 AF488), Alexa Fluor® 546 (sc-374612 AF546), Alexa Fluor® 594 (sc-374612 AF594) or Alexa Fluor® 647 (sc-374612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374612 AF680) or Alexa Fluor® 790 (sc-374612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Pancreatic Lipase (A-3) is recommended for detection of Pancreatic Lipase, and Pancreatic Lipase Related Protein 1 and 2 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

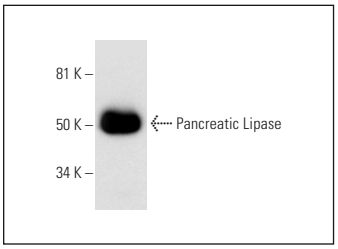
Molecular Weight of Pancreatic Lipase: 51 kDa.

Positive Controls: human placenta extract: sc-363772.

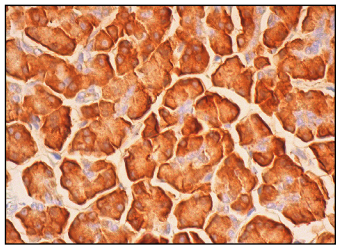
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Pancreatic Lipase (A-3): sc-374612. Western blot analysis of Pancreatic Lipase expression in human pancreas tissue extract.



Pancreatic Lipase (A-3): sc-374612. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

SELECT PRODUCT CITATIONS

1. Elenbaas, J.S., et al. 2018. Lamin A/C maintains exocrine pancreas homeostasis by regulating stability of RB and activity of E2F. Gastroenterology 154: 1625-1629.
2. Hollenbach, M., et al. 2021. Pitfalls in AR42J-model of cerulein-induced acute pancreatitis. PLoS ONE 16: e0242706.
3. Girdhar, K., et al. 2022. Gut microbiota regulate pancreatic growth, exocrine function, and gut hormones. Diabetes 71: 945-960.

STORAGE

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