SANTA CRUZ BIOTECHNOLOGY, INC.

LPL (F-1): sc-373759

BACKGROUND

The Lipase gene family belongs to one of the most robust genetic superfamilies found in living organisms, which includes esterases and thioesterases. Lipase gene products are related by tertiary structure rather than primary amino acid sequence. Members of the AB hydrolase subfamily include hepatic lipase (HL), endothelial lipase (EL), lipoprotein lipase (LPL) and pancreatic lipase (PL). HL balances the composition and transport of lipoproteins in human plasma. Synthesized in endothelial cells, EL hydrolyzes high density lipoproteins. LPL, a homodimer attached to the membrane by a GPI-anchor, mediates the hydrolysis of triglycerides of very low density lipoproteins and circulating chylomicrons. Defects in LPL may cause chylomicronemia syndrome or a form of lipoprotein lipase deficiency characterized by hypertriglyceridemia.

CHROMOSOMAL LOCATION

Genetic locus: LPL (human) mapping to 8p21.3; Lpl (mouse) mapping to 8 B3.3.

SOURCE

LPL (F-1) is a mouse monoclonal antibody raised against amino acids 28-80 mapping near the N-terminus of LPL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LPL (F-1) is available conjugated to agarose (sc-373759 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373759 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373759 PE), fluorescein (sc-373759 FITC), Alexa Fluor® 488 (sc-373759 AF488), Alexa Fluor® 546 (sc-373759 AF546), Alexa Fluor® 594 (sc-373759 AF594) or Alexa Fluor® 647 (sc-373759 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373759 AF680) or Alexa Fluor® 790 (sc-373759 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

LPL (F-1) is recommended for detection of LPL 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).

Suitable for use as control antibody for LPL siRNA (h): sc-44900, LPL siRNA (m): sc-44901, LPL siRNA (r): sc-156043, LPL shRNA Plasmid (h): sc-44900-SH, LPL shRNA Plasmid (m): sc-44901-SH, LPL shRNA Plasmid (r): sc-156043-SH, LPL shRNA (h) Lentiviral Particles: sc-44900-V, LPL shRNA (m) Lentiviral Particles: sc-44901-V and LPL shRNA (r) Lentiviral Particles: sc-156043-V.

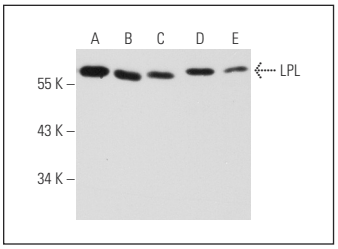
Molecular Weight of LPL: 56 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

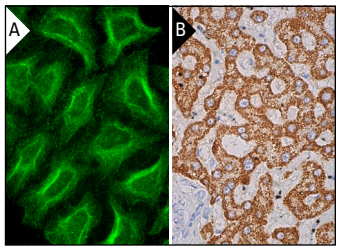
STORAGE

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

DATA



LPL (F-1): sc-373759. Western blot analysis of LPL expression in MCF7 (**A**), CCRF-CEM (**B**), L929 (**C**), NIH/3T3 (**D**) and NRK (**E**) whole cell lysates.



LPL (F-1): sc-373759. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (**B**).

SELECT PRODUCT CITATIONS

1. Yang, X., et al. 2014. Green tea extracts reduce adipogenesis by decreasing expression of transcription factors C/EBPα and PPARγ. Int. J. Clin. Exp. Med. 7: 4906-4914.
2. Liang, Y., et al. 2017. Induced pluripotent stem cells-derived mesenchymal stem cells attenuate cigarette smoke-induced cardiac remodeling and dysfunction. Front. Pharmacol. 8: 501.
3. Gorres-Martens, B.K., et al. 2018. Exercise prevents HFD- and OVX-induced type 2 diabetes risk factors by decreasing fat storage and improving fuel utilization. Physiol. Rep. 6: e13783.
4. Warner, G.R., et al. 2019. Ovarian metabolism of an environmentally relevant phthalate mixture. Toxicol. Sci. 169: 246-259.
5. Shen, L., et al. 2019. Cachexia-related long noncoding RNA, CAAInc1, suppresses adipogenesis by blocking the binding of HuR to adipogenic transcription factor mRNAs. Int. J. Cancer 145: 1809-1821.
6. González-Granillo, M., et al. 2020. Selective estrogen receptor (ER)β activation provokes a redistribution of fat mass and modifies hepatic triglyceride composition in obese male mice. Mol. Cell. Endocrinol. 502: 110672.
7. Overby, H., et al. 2020. Soluble epoxide hydrolase inhibition by t-TUCB promotes brown adipogenesis and reduces serum triglycerides in diet-induced obesity. Int. J. Mol. Sci. 21: 7039.
8. Grancieri, M., et al. 2021. Protein digests and pure peptides from chia seed prevented adipogenesis and inflammation by inhibiting PPARγ and NFκB Pathways in 3T3L-1 adipocytes. Nutrients 13: E176.

RESEARCH USE

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