

LPL (C-20): sc-32383

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.

REFERENCES

1. Wong, H., et al. 2002. The lipase gene family. *J. Lipid Res.* 43: 993-999.
2. Ferreira, L.D., et al. 2002. Sciatic nerve lipoprotein lipase is reduced in streptozotocin-induced diabetes and corrected by Insulin. *Endocrinology* 143: 1213-1217.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 151670. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Tsutsumi, K., et al. 2003. Lipoprotein lipase and atherosclerosis. *Curr. Vasc. Pharmacol.* 1: 11-17.
5. Otarod, J.K., et al. 2004. Lipoprotein lipase and its role in regulation of plasma lipoproteins and cardiac risk. *Curr. Atheroscler. Rep.* 6: 335-342.
6. Zhang, L., et al. 2005. Calcium triggers folding of lipoprotein lipase to active dimers. *J. Biol. Chem.* 280: 42580-42591.
7. LocusLink Report (LocusID: 3990). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

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

SOURCE

LPL (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of lipoprotein lipase of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-32383 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

LPL (C-20) is recommended for detection of LPL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

LPL (C-20) is also recommended for detection of LPL in additional species, including equine, canine, bovine, porcine and avian.

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: 3T3-L1 cell lysate: sc-2243, mouse heart extract: sc-2254 or rat heart extract: sc-2393.

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) 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.

SELECT PRODUCT CITATIONS

1. Côté, M., et al. 2010. Apolipoprotein C-II and lipoprotein lipase show a temporal and geographic correlation with surfactant lipid synthesis in preparation for birth. *BMC Dev. Biol.* 10: 111.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **LPL (F-1): sc-373759** or **LPL (5D2): sc-73646**, our highly recommended monoclonal alternatives to LPL (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LPL (F-1): sc-373759**.