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LPL Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14170C

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P06858
Other Accession	Q06000, P49923, P11152, P11151, NP_000228.1
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Mouse, Pig, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18804
Calculated MW	53162
Antigen Region	300-327

Additional Information

Gene ID	4023
Other Names	Lipoprotein lipase, LPL, LPL, LIPD
Target/Specificity	This LPL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 300-327 amino acids from the Central region of human LPL.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	LPL Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LPL
Synonyms	LIPD

Function	Key enzyme in triglyceride metabolism. Catalyzes the hydrolysis of triglycerides from circulating chylomicrons and very low density lipoproteins (VLDL), and thereby plays an important role in lipid clearance from the blood stream, lipid utilization and storage (PubMed:11342582, PubMed:27578112, PubMed:8675619). Although it has both phospholipase and triglyceride lipase activities it is primarily a triglyceride lipase with low but detectable phospholipase activity (PubMed:12032167, PubMed:7592706). Mediates margination of triglyceride-rich lipoprotein particles in capillaries (PubMed:24726386). Recruited to its site of action on the luminal surface of vascular endothelium by binding to GPIHBP1 and cell surface heparan sulfate proteoglycans (PubMed:11342582, PubMed:27811232).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P11151}; Peripheral membrane protein {ECO:0000250|UniProtKB:P11151}; Extracellular side {ECO:0000250|UniProtKB:P11151}. Secreted. Secreted, extracellular space, extracellular matrix. Note=Newly synthesized LPL binds to cell surface heparan proteoglycans and is then released by heparanase Subsequently, it becomes attached to heparan proteoglycan on endothelial cells (PubMed:27811232). Locates to the plasma membrane of microvilli of hepatocytes with triglyceride-rich lipoproteins (TRL) Some of the bound LPL is then internalized and located inside non- coated endocytic vesicles (By similarity) {ECO:0000250|UniProtKB:P11151, ECO:0000269|PubMed:27811232}
Tissue Location	Detected in blood plasma (PubMed:11893776, PubMed:12641539, PubMed:2340307). Detected in milk (at protein level) (PubMed:2340307).

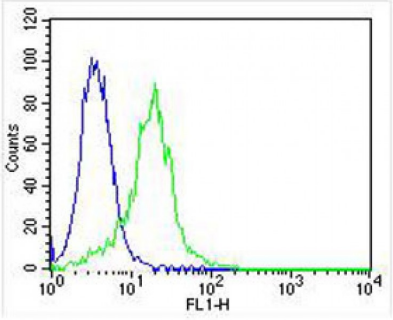
Background

LPL encodes lipoprotein lipase, which is expressed in heart, muscle, and adipose tissue. LPL functions as a homodimer, and has the dual functions of triglyceride hydrolase and ligand/bridging factor for receptor-mediated lipoprotein uptake. Severe mutations that cause LPL deficiency result in type I hyperlipoproteinemia, while less extreme mutations in LPL are linked to many disorders of lipoprotein metabolism. [provided by RefSeq].

References

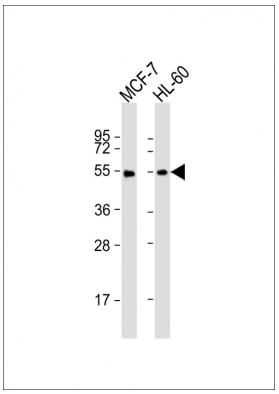
Hu, M., et al. Pharmacogenet. Genomics 20(10):634-637(2010)
Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :
Johansen, C.T., et al. Nat. Genet. 42(8):684-687(2010)
Zabaneh, D., et al. PLoS ONE 5 (8) (2010) :
Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :

Images



Overlay histogram showing Hela cells stained with AP14170c (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP14170c, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/400 dilution for 40 min at 37°C. Isotype control antibody (blue line) was Rabbit

IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-LPL Antibody (Center) at 1:1000-1:2000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 53 kDa Blocking/Dilution buffer: 5% NFDM/TBST.