

Product datasheet for **TA399851**

LPL Mouse Monoclonal Antibody [Clone ID: 5D2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	5D2
Applications:	ELISA, ICC, IF, Neutralize, WB
Reactivity:	Human, Rat, Chicken, Guinea Pig, Bovine, Feline
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	The original antibody was generated by immunizing mice with bovine LPL.



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Specificity:	<p>The antibody is specific for lipoprotein lipase (LPL) and it binds to a tryptophan (Trp)-rich loop in the carboxyl terminus of LPL. The antibody does not cross react with mouse LPL. LPL is a key enzyme in triglyceride metabolism, it 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.</p> <p>LPL was immunoprecipitated from postheparin plasma using this antibody. The antibody was used both to capture LPL and to detect the bound LPL in a sandwich ELISA, indicating the epitope to be present in duplicate. In another sandwich ELISA analysis, the antibody was used to detect the LPL antigen (Peterson et al., 1992, PMID: 1279089). The antibody detected LPL from human, chicken and guinea pig by western blot analysis. The specificity of the original format of the antibody was confirmed by ELISA analysis (Chang et al., 1998; PMID: 9831623). Pretreatment of LPL with the antibody totally suppressed LPL-induced monocyte adhesion to endothelial cells (Mamputu et al., 1997; PMID: 9323582). Further, LDL was immunoneutralized with the antibody, totally suppressing LPL-induced VSMC proliferation (Mamputu et al., 2000; PMID: 11031206). Immunofluorescence was performed on LPL expressed on CHO-K1 cells using this antibody (Voss et al., 2011; PMID: 21518912). The binding affinity of the antibody to a synthetic LPL peptide containing the Trp-rich loop of human, mouse, bovine, rat and chicken, was measured by surface plasmon resonance. The binding affinity of the antibody to the human, bovine and chicken LPL peptides was high (K_D of 0.19, 0.78 nM and 0.34 nM, respectively), the binding affinity for the rat LPL peptide was reduced (K_d= 2.99nM), and no binding to the Trp-rich peptide from mouse LPL was detected. The antibody detected LPL by western blot analysis. By immunocytochemistry, the antibody bound avidly to the wildtype human LPL on CHO cells. The crystal structure of the Fab version of the antibody was solved (Luz et al., 2020; PMID: 32690595).</p>
Formulation:	PBS with 0.02% Proclin 300.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.
Database Link:	P06858
Synonyms:	EC 3.1.1.34; LPL; Phospholipase A1