Human Lipoprotein Lipase/LPL Antibody

Monoclonal Mouse IgG_{2B} Clone # 1012307

Catalog Number: MAB7197

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Lipoprotein Lipase/LPL in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 1012307
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line CHO-derived human Lipoprotein Lipase/LPL protein Ala28-Gly475 Accession # P06858
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

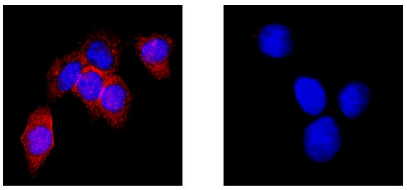
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	Immersion fixed WM-115 human malignant melanoma cell line
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of human heart

DATA

Immunocytochemistry

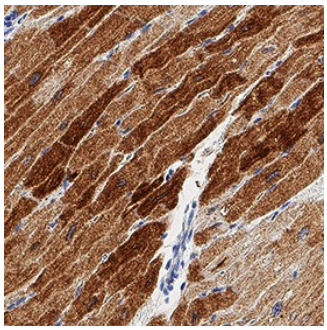


Positive (WM-115 cells)

Negative (MCF-7 cells)

Lipoprotein Lipase/LPL in WM-115 Human Cell Line. Lipoprotein Lipase/LPL was detected in immersion fixed WM-115 human malignant melanoma cell line (positive staining) and MCF-7 human breast cancer cell line (negative control) using Mouse Anti-Human Lipoprotein Lipase/LPL Monoclonal Antibody (Catalog # MAB7197) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



Lipoprotein Lipase/LPL in Human Heart. Lipoprotein Lipase/LPL was detected in immersion fixed paraffin-embedded sections of human heart using Mouse Anti-Human Lipoprotein Lipase/LPL Monoclonal Antibody (Catalog # MAB7197) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001)). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in cardiomyocytes. Staining was performed our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Lipoprotein Lipase (LPL) is a rate-limiting enzyme responsible for the hydrolysis of triglycerides (1). LPL forms a non-covalent active homodimeric molecule (2). Monomeric LPL contains an N-terminal domain with the catalytic triad responsible for lipolysis and a 22-amino acid loop that serves as a cover for the catalytic site (3) in addition to a C-terminal domain that contains the region required for dimerization (4) as well as the primary heparin-binding domain that is important for lipoprotein binding. LPL is expressed in many tissues (5, 6) where it is synthesized in the ER of parenchymal cells and secreted to capillaries. LPL is highly controlled by regulatory factors such as apolipoproteins, angiopoietins, and hormones (7). LPL can be produced by macrophages and this expression is a critical event in the pathogenesis of atherosclerosis (8) in addition to contributing to the macrophage inflammatory response (9). Variants of LPL have been associated with altered risk of several diseases including coronary heart disease (10, 11), cerebrovascular accidents (12, 13) and Alzheimer's disease (14) and can result in LPL deficiency and consequent hyperlipidemia (15). LPL expression is a prognostic marker in B cell chronic lymphocytic leukemia (16) and has been linked to solid tumor cell proliferation (17). As LPL plays a critical role in several diseases, it is a therapeutic target for both inhibition (18) and induction (19). The LPL enzyme activity can be inhibited by Recombinant Mouse ANGPTL3.

References:

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