Product name: Anti-Lipoprotein lipase antibody [LPL.A4] ab21356

Description: Mouse monoclonal [LPL.A4] to Lipoprotein lipase

Host species: Mouse

Tested applications: Suitable for: ICC/IF, IHC-P, Flow Cyt, WB, ELISA

Species reactivity: Reacts with: Mouse, Cow, Human

Immunogen: Full length protein (Human).

Positive control: Purified human and bovine recombinant Lipoprotein lipase.

General notes: This product was changed from ascites to tissue culture supernatant on 25th May 2018. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Form: Liquid

Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer: Preservative: 0.05% Sodium Azide
Constituents: PBS, pH 7.4

Purity: Protein A purified

Purification notes: Protein A affinity chromatography

Clonality: Monoclonal

Clone number: LPL.A4

Isotype: IgG1

Applications

Our Abpromise guarantee covers the use of ab21356 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

The primary function of this lipase is the hydrolysis of triglycerides of circulating chylomicrons and very low density lipoproteins (VLDL). Binding to heparin sulfate proteoglycans at the cell surface is vital to the function. The apolipoprotein, APOC2, acts as a coactivator of LPL activity in the presence of lipids on the luminal surface of vascular endothelium.

Involvement in disease

Defects in LPL are the cause of lipoprotein lipase deficiency (LPL deficiency) [MIM:238600]; also known as familial chylomicronemia or hyperlipoproteinemia type I. LPL deficiency chylomicronemia is a recessive disorder usually manifesting in childhood. On a normal diet, patients often present with abdominal pain, hepatosplenomegaly, lipemia retinalis, eruptive xanthomata, and massive hypertriglyceridemia, sometimes complicated with acute pancreatitis.

Sequence similarities

Belongs to the AB hydrolase superfamily. Lipase family.

Contains 1 PLAT domain.

Post-translational modifications

Tyrosine nitration after lipopolysaccharide (LPS) challenge down-regulates the lipase activity.

Cellular localization

Cell membrane. Secreted. Locates to the plasma membrane of microvilli of hepatocytes with triacyl-glycerol-rich lipoproteins (TRL). Some of the bound LPL is then internalized and located inside non-coated endocytic vesicles.

Images

All lanes : Anti-Lipoprotein lipase antibody [LPL.A4] (ab21356) at 1/1000 dilution

Lane 1 : Human Lipoprotein lipase.
Lane 2 : Bovine Lipoprotein lipase

Lysates/proteins at 10 µg per lane.

Predicted band size: 53 kDa
Observed band size: 55,60 kDa

why is the actual band size different from the predicted?
ab21356 staining Lipoprotein lipase in Mouse small intestine tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1.5% serum for 30 minutes at 23°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (2 µg/ml) for 14 hours at 4°C. A Biotin-conjugated Goat anti-mouse IgG polyclonal (1/200) was used as the secondary antibody.

Overlay histogram showing HeLa cells stained with ab21356 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab21356, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed.

ab21356 staining Lipoprotein lipase in Mouse intestine cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.1% Triton X-100 and blocked with 5% BSA for 2 hours at 23°C. Samples were incubated with primary antibody (1/500) for 8 hours at 4°C. An Alexa Fluor® 488-conjugated Rat anti-mouse IgG1 polyclonal (1/250) was used as the secondary antibody.

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