abcam

Product datasheet

Anti-Lipoprotein lipase antibody [5D2] ab93898

KO VALIDATED

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Overview

Product name	Anti-Lipoprotein lipase antibody [5D2]
Description	Mouse monoclonal [5D2] to Lipoprotein lipase
Host species	Mouse
Specificity	This antibody does not recognise hepatic lipase.
Tested applications	**Suitable for:** ICC/IF, Flow Cyt
Species reactivity	**Reacts with:** Mouse, Cat, Human
Immunogen	Full length native protein (purified) corresponding to Cow Lipoprotein lipase. Purified bovine milk lipoprotein lipase protein. Database link: **P11151**
Positive control	ICC/IF: HeLa cells and mouse cortical glia. Flow Cyt: HeLa cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.1% Sodium azide Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	5D2
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab93898 in the following tested applications.

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

Application	Abreviews	Notes
ICC/IF		Use a concentration of 2 - 5 µg/ml.
Flow Cyt		Use 1µg for 10^6 cells. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

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 proteogylcans 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.

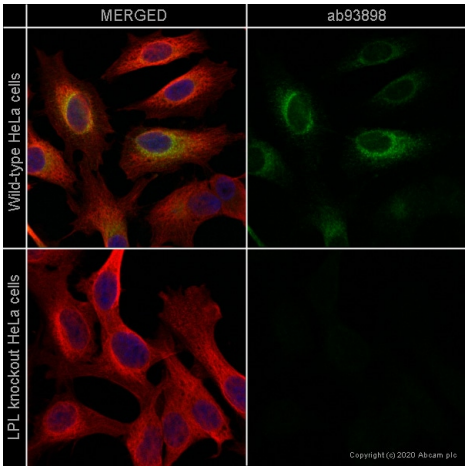
Involvement in disease Defects in LPL are the cause of lipoprotein lipase deficiency (LPL deficiency) [MIM:238600]; also known as familial chylomicronemia or hyperlipoproteinemia type I. LPL deficiency chylomicronemia is a recessive disorder usually manifesting in childhood. On a normal diet, patients 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.

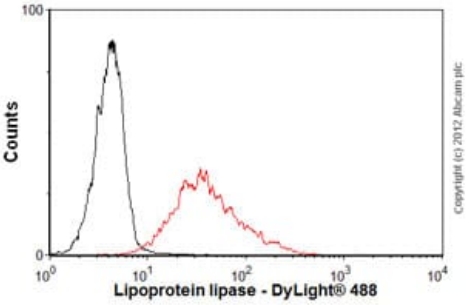
Cellular localization Cell membrane. Secreted. Locates to the plasma membrane of microvilli of hepatocytes with triacyl-glycerol-rich lipoproteins (TRL). Some of the bound LPL is then internalized and located inside non-coated endocytic vesicles.

Images



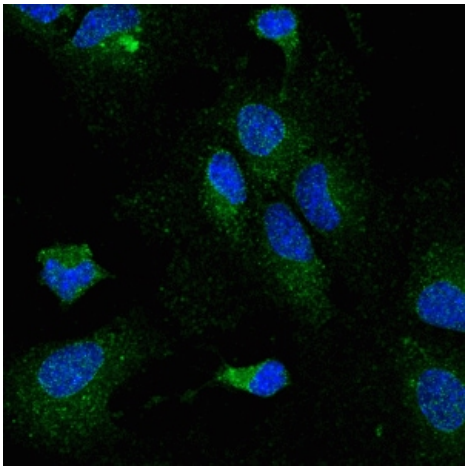
Immunocytochemistry/ Immunofluorescence - Anti-Lipoprotein lipase antibody [5D2] (ab93898)

ab93898 staining Lipoprotein lipase in wild-type HeLa cells (top panel) and LPL knockout HeLa cells (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab93898 at 5µg/ml concentration and **ab6046** (Rabbit polyclonal to beta Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (**ab150117**) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (**ab150080**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



Flow Cytometry - Anti-Lipoprotein lipase antibody [5D2] (ab93898)

Overlay histogram showing HeLa cells stained with ab93898 (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 (ab93898, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-Lipoprotein lipase antibody [5D2] (ab93898)

Immunocytochemistry/Immunofluorescence analysis of mouse cortical glia labelling Lipoprotein lipase (green) with ab93898 at 2µg/ml. Cells were permemabilized with PBS + 0.1% Triton X-100 and blocked with PBS + 10% FBS. Nuclei stained with Hoechst (blue).

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