abcam

Product datasheet

Anti-LCAT antibody [EPR1384Y] - Low endotoxin, Azide free ab227112

Recombinant   RabMAb®

1 References   **4 Images**

Overview

Product name	Anti-LCAT antibody [EPR1384Y] - Low endotoxin, Azide free
Description	Rabbit monoclonal [EPR1384Y] to LCAT - Low endotoxin, Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human brain and liver tissue IP: Human plasma
General notes	ab227112 is the carrier-free version of **ab51060**.

Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information **see here**.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Our **Low endotoxin, azide-free formats** have low endotoxin level (≤ 1 EU/ml, determined by the LAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR1384Y
Isotype	IgG

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab227112 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
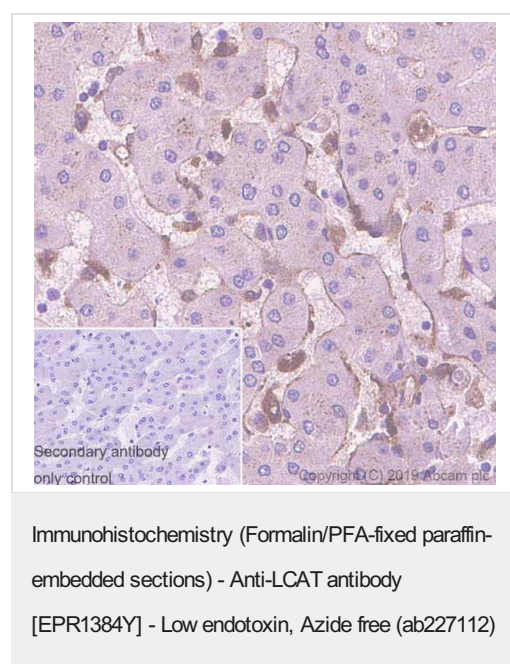
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 62 kDa (predicted molecular weight: 50 kDa).
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Target

Function	Central enzyme in the extracellular metabolism of plasma lipoproteins. Synthesized mainly in the liver and secreted into plasma where it converts cholesterol and phosphatidylcholines (lecithins) to cholesteryl esters and lysophosphatidylcholines on the surface of high and low density lipoproteins (HDLs and LDLs). The cholesterol ester is then transported back to the liver. Has a preference for plasma 16:0-18:2 or 18:O-18:2 phosphatidylcholines. Also produced in the brain by primary astrocytes, and esterifies free cholesterol on nascent APOE-containing lipoproteins secreted from glia and influences cerebral spinal fluid (CSF) APOE- and APOA1 levels. Together with APOE and the cholesterol transporter ABCA1, plays a key role in the maturation of glial-derived, nascent lipoproteins. Required for remodeling high-density lipoprotein particles into their spherical forms.

Tissue specificity	Expressed mainly in brain, liver and testes. Secreted into plasma and cerebral spinal fluid. In liver, expressed in HEPG2 hepatocytes.
Involvement in disease	Defects in LCAT are the cause of lecithin-cholesterol acyltransferase deficiency (LCATD) [MIM:245900]; also called Norum disease. LCATD is a disorder of lipoprotein metabolism characterized by inadequate esterification of plasmatic cholesterol. Two clinical forms are recognized: familial LCAT deficiency and fish-eye disease. Familial LCAT deficiency is associated with a complete absence of alpha and beta LCAT activities and results in esterification anomalies involving both HDL (alpha-LCAT activity) and LDL (beta-LCAT activity). It causes a typical triad of diffuse corneal opacities, target cell hemolytic anemia, and proteinuria with renal failure.
	Defects in LCAT are a cause of fish-eye disease (FED) [MIM:136120]; also known as dyslipoproteinemic corneal dystrophy or alpha-LCAT deficiency. FED is due to a partial LCAT deficiency that affects only alpha-LCAT activity. It is characterized by low plasma HDL and corneal opacities due to accumulation of cholesterol deposits in the cornea ('fish-eye').
Sequence similarities	Belongs to the AB hydrolase superfamily. Lipase family.
Post-translational modifications	O- and N-glycosylated. O-glycosylation on Thr-431 and Ser-433 consists of sialylated galactose beta 1-->3N-acetylgalactosamine structures. N-glycosylated sites contain sialylated triantennary and/or biantennary complex structures.
Cellular localization	Secreted. Secreted into blood plasma. Produced in astrocytes and secreted into cerebral spinal fluid.

Images

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LCAT antibody [EPR1384Y] - Low endotoxin, Azide free (ab227112)
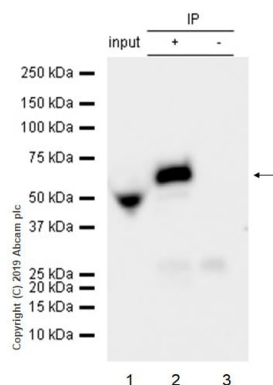
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue sections labeling LCAT with purified **ab51060** at 1/100 dilution (1.03 µg/mL). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab51060**)

Immunoprecipitation - Anti-LCAT antibody
[EPR1384Y] - Low endotoxin, Azide free (ab227112)

ab51060 (Purified) at 1/20 dilution (0.5ug) immunoprecipitating LCAT in Human plasma.

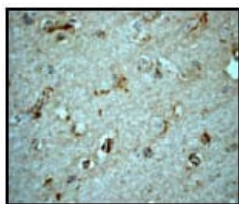Lane 1 (input): Human plasma 10ug

Lane 2 (+): ab51060 & Human plasma

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab51060 in Human plasma

For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/1000 dilution.

Blocking and diluting buffer: 5% NFDM/TBST.

50 kDa band in input lane should be human IgG heavy chain.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab51060)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LCAT antibody
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ab51060 (unpurified) at 1/100 dilution staining LCAT in paraffin embedded human brain tissue by Immunohistochemistry. Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab51060).

Why choose a recombinant antibody?

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

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Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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