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Anti-LCAT Antibody
Catalog # ABO11275

Specification

Anti-LCAT Antibody - Product Information

Application	**WB**
Primary Accession	P04180
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Phosphatidylcholine-sterol acyltransferase(LCAT) detection. Tested with WB in Human;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-LCAT Antibody - Additional Information

Gene ID 3931

Other Names
Phosphatidylcholine-sterol acyltransferase, 2.3.1.43, Lecithin-cholesterol acyltransferase, Phospholipid-cholesterol acyltransferase, LCAT

Calculated MW
|cardiovascular|lipids / lipoproteins|lipid metabolism|cholesterol metabolism|
signal transduction|
cardiovascular|atherosclerosis|lipoprotein metabolism|
cancer|cancer metabolism|metabolic signaling pathway|metabolism of lipids and lipoproteins|
metabolism|pathways and processes|metabolic signaling pathways|lipid and lipoprotein metabolism|types of disease|heart disease KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Phosphatidylcholine-sterol acyltransferase

Tissue Specificity
49578 MW

Source
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. .

Protein Name
Secreted . Secreted into blood plasma. Produced in astrocytes and secreted into cerebral spinal fluid (CSF).

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human LCAT(300-313aa RDFQRFFADLHFEE), different from the related rat sequence by two amino acids, and from the mouse sequence by three amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-LCAT Antibody - Protein Information

Name LCAT

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) (PubMed:10329423, PubMed:19065001, PubMed:26195816). 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 (PubMed:8820107). 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 (PubMed:10722751). Catalyzes the hydrolysis of 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine (platelet-activating factor or PAF) to 1-O-alkyl-sn-glycero-3-phosphocholine (lyso-PAF) (PubMed:8016111). Also catalyzes the transfer of the acetate group from PAF to 1-hexadecanoyl- sn-glycero-3-phosphocholine forming lyso-PAF (PubMed:8016111). Catalyzes the esterification of (24S)-hydroxycholesterol (24(S)OH-C), also known as cerebrosterol to produce 24(S)OH-C monoesters (PubMed:24620755).

Cellular Location
Secreted. Note=Secreted into blood plasma (PubMed:10222237, PubMed:3458198, PubMed:8820107) Produced in astrocytes and secreted into cerebral spinal fluid (CSF) (PubMed:10222237).

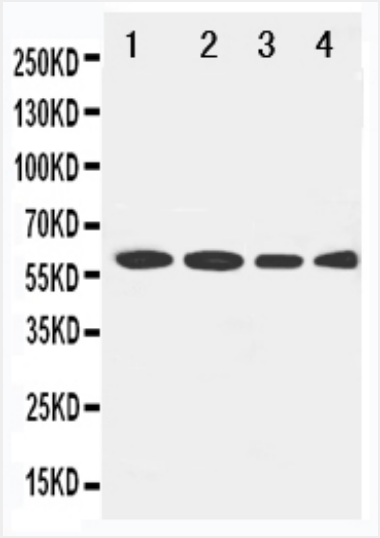
Tissue Location
Detected in blood plasma (PubMed:10222237, PubMed:3458198, PubMed:8820107). Detected in cerebral spinal fluid (at protein level) (PubMed:10222237). Detected in liver (PubMed:3458198, PubMed:3797244). Expressed mainly in brain, liver and testes

Anti-LCAT Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-LCAT Antibody - Images



Anti-LCAT antibody, ABO11275, Western blottingLane 1: Rat Brain Tissue LysateLane 2: U87 Cell LysateLane 3: HELA Cell LysateLane 4: SMMC Cell Lysate

Anti-LCAT Antibody - Background

LCAT(Lecithin: Cholesterol Acyltransferase), is an enzyme that converts free cholesterol into cholesteryl ester. Azoulay et al.(1987) used a cDNA clone corresponding to LCAT to assign the locus to 16q22 through the analysis of DNA from somatic cell hybrids and in situ hybridization. LCAT plays an important role in lipoprotein metabolism, especially in the process termed reverse cholesterol transport" The enzyme is synthesized in the liver and circulates in blood plasma as a complex with components of high density lipoprotein(HDL). Cholesterol from peripheral cells is transferred to HDL particles