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Anti-LCAT Picoband Antibody

Catalog # ABO12343

Product Information

Application	WB
Primary Accession	P16301
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Phosphatidylcholine-sterol acyltransferase(LCAT) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	16816
Other Names	Phosphatidylcholine-sterol acyltransferase, 2.3.1.43, Lecithin-cholesterol acyltransferase, Phospholipid-cholesterol acyltransferase, Lcat
Calculated MW	49747
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Secreted . Secreted into blood plasma (PubMed:8820107). Produced in astrocytes and secreted into cerebral spinal fluid (CSF) (By similarity). .
Tissue Specificity	Detected in blood plasma (PubMed:8820107). Produced and secreted by astrocytes (at protein level) (PubMed:19065001). Abundantly expressed in liver, brain and testis with highest levels in liver. In the brain, found in cerebellum, cerebral cortex, hippocampus and brain stem. Located to neurons and neuroglia. .
Source	Eukaryota
Protein Name	Phosphatidylcholine-sterol acyltransferase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of mouse LCAT (389-423aa QPVHLLPMNETDHLNMVFSNKTLEHINAILLGAYR), different from the related human sequence by six amino acids, and from the related rat sequence by four 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.

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:19065001). The cholesterol ester is then transported back to the liver. 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 (PubMed:19065001). Together with APOE and the cholesterol transporter ABCA1, plays a key role in the maturation of glial-derived, nascent lipoproteins (PubMed:19065001). Required for remodeling high-density lipoprotein particles into their spherical forms (PubMed:19065001). Has a preference for plasma 16:0-18:2 or 18:O-18:2 phosphatidylcholines (PubMed:8820107). 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:10393212). Also catalyzes the transfer of the acetate group from PAF to 1-hexadecanoyl- sn-glycero-3-phosphocholine forming lyso-PAF (By similarity). Catalyzes the esterification of (24S)-hydroxycholesterol (24(S)OH-C), also known as cerebrosterol to produce 24(S)OH-C monoesters (By similarity).
Cellular Location	Secreted. Note=Secreted into blood plasma (PubMed:8820107). Produced in astrocytes and secreted into cerebral spinal fluid (CSF) (By similarity). {ECO:0000250|UniProtKB:P04180, ECO:0000269|PubMed:8820107}
Tissue Location	Detected in blood plasma (PubMed:8820107). Produced and secreted by astrocytes (at protein level) (PubMed:19065001) Abundantly expressed in liver, brain and testis with highest levels in liver. In the brain, found in cerebellum, cerebral cortex, hippocampus and brain stem. Located to neurons and neuroglia

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, esterified through the action of LCAT on HDL, and incorporated into the core of the lipoprotein. The cholesterol ester is thereby transported to the liver (Jonas, 2000).

Images

Anti- LCAT Picoband antibody, ABO12343, Western



blottingAll lanes: Anti LCAT (ABO12343) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Testis Tissue Lysate at 50ugLane 3: HEPG2 Whole Cell Lysate at 40ugLane 4: HELA Whole Cell Lysate at 40ugPredicted bind size: 50KDObserved bind size: 50KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.