Active Lecithin Cholesterol Acyltransferase (LCAT)

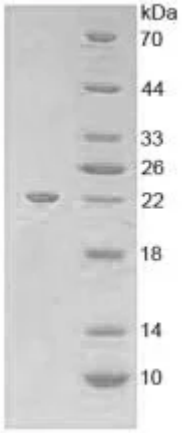
Catalog#:PEM12981

概述（Summary）

别称（Alternative Names）	phosphatidylcholine-sterol O-acyltransferase; Phospholipid-cholesterol acyltransferase
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Glu41-His210】
Accession #	P16301
表达宿主（Host）	E.coli
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	20.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	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. 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. Has a preference for plasma 16:0-18:2 or 18:O-18:2 phosphatidylcholines. 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). Also catalyzes the transfer of the acetate group from PAF to 1-hexadecanoyl-sn-glycero-3-phosphocholine forming lyso-PAF. Catalyzes the esterification of (24S)-hydroxycholesterol (24(S)OH-C), also known as cerebrosterol to produce 24(S)OH-C monoesters.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

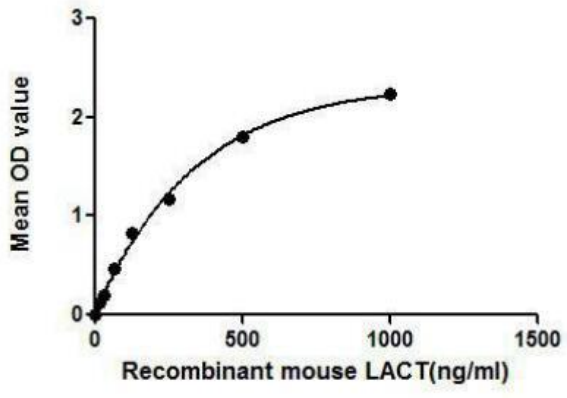


Figure 1. The binding activity of LCAT with APOA1.

LCAT (Phosphatidylcholine-sterol acyltransferase) is an enzyme in the extracellular metabolism of plasma lipoproteins, which converts cholesterol and phosphatidylcholines (lecithins) to cholesteryl esters and lysophosphatidylcholines. It is reported that APOA1 (Apolipoprotein A-I) acts as a cofactor for the LCAT. Thus, a binding ELISA assay was conducted to detect the association

of LCAT with APOA1. Briefly, recombinant rat LCAT were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to APOA1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-LCAT pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of LCAT with APOA1 was shown in Figure 1 and this effect was in a dose dependent manner.

注意事项（Note）

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