

Recombinant Human LCAT, His-tagged

Cat. No. LCAT-7117H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human LCAT protein, fused to His-tag at N-terminus, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	25-440aa
Description	LCAT (lecithin-cholesterol acyltransferase), also known as phosphatidylcholine-sterol O-acyltransferase, belongs to the AB hydrolase superfamily. LCAT is responsible for the esterification of the free cholesterol of plasma lipoproteins. This enzyme is converts free cholesterol into cholesteryl ester (a more hydrophobic form of cholesterol), which is then sequestered into the core of a lipoprotein particle, eventually making the newly synthesized HDL spherical and forcing the reaction to become unidirectional since the particles are removed from the surface. It is central enzyme in the extracellular metabolism of plasma lipoproteins and required for remodeling high-density lipoprotein particles into their spherical forms.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.4M Urea, 10% glycerol
Molecular Mass	49.8kDa (441aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSHMFWLLN VLFPPHTTPK AELSNHTRPV ILVPGCLGNQ LEAKLDKPDV VNWMCYRKTE DFFTIWLDLN MFLPLGVDCW

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

IDNTRVVYNR SSGLVSNAPG VQIRVPGFGK TYSVEYLDSS KLAGYLHTLV
 QNLVNNGYVR DETVRAAPYD WRLEPGQQEE YYRKLGLVE EMHAAYGKPV
 FLIGHSLGCL HLLYFLLRQP QAWKDRFIDG FISLGAPWGG SIKPMLVLAS
 GDNQGIPIMS SIKLKEEQRI TTTSPWMFPS RMAWPEDHVF ISTPSFNITG
 RDFQRFFADL HFEEGWYMWL QSRDLLAGLP APGVEVYCLY GVGLPTPRTY
 IYDHGFPYTD PVGVLYEDGD DTVATRSTEL CGLWQGRQPQ PVHLLPLHGI
 QHLNMVFSNL TLEHINAILL GAYRQGPPAS PTASPEPPPP E

Purity >85% by SDS - PAGE

Applications SDS-PAGE

Storage Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

Concentration 0.5 mg/ml

GENE INFORMATION

Gene Name [LCAT lecithin-cholesterol acyltransferase \[Homo sapiens \]](#)

Official Symbol LCAT

Synonyms LCAT; lecithin-cholesterol acyltransferase; phosphatidylcholine-sterol acyltransferase; phospholipid-cholesterol acyltransferase;

Gene ID [3931](#)

mRNA Refseq [NM_000229](#)

Protein Refseq [NP_000220](#)

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MIM	606967
UniProt ID	P04180
Chromosome Location	16q22.1
Pathway	Glycerophospholipid metabolism, organism-specific biosystem; Glycerophospholipid metabolism, conserved biosystem; HDL-mediated lipid transport, organism-specific biosystem; Lipid digestion, mobilization, and transport, organism-specific biosystem; Lipoprotein metabolism, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of lipids and lipoproteins, organism-specific biosystem;
Function	apolipoprotein A-I binding; phosphatidylcholine-sterol O-acyltransferase activity; phosphatidylcholine-sterol O-acyltransferase activity; phospholipase A2 activity; protein binding; transferase activity, transferring acyl groups;