Recombinant PCAT1 protein (His tag)

Catalog Number	545481
Synonyms	LPC acyltransferase 1; LPCAT-1; LysoPC acyltransferase 1; 1-acylglycerol-3-phosphate O-acyltransferase; 1-acylglycerophosphocholine O-acyltransferase; 1-alkenylglycerophosphocholine O-acyltransferase; 1-alkylglycerophosphocholine O-acetyltransferase; Acetyl-CoA:lyso-platelet-activating factor acetyltransferase; Acetyl-CoA:lyso-PAF acetyltransferase; Lyso-PAF acetyltransferase; LysoPAFAT; Acyltransferase-like 2; Phosphonoformate immuno-associated protein 3
Species	Human
Expression System	E. coli
Accession	Q8NF37
Molecular Weight	Predictes a molecular mass of 48.14 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	79-492
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 79-492 aa (Q8NF37) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human LPCAT1 (Lysophosphatidylcholine acyltransferase 1) Fragment (aa 79-492) is a high-purity protein designed for studying acyltransferase and acetyltransferase activities. This fragment fully encompasses the EF-hand 1 and EF-hand 2 domains, making it an ideal tool for investigating calcium-independent lipid metabolism and related cellular processes. Lysophosphatidylcholine acyltransferase 1 (LPCAT1) is a multifunctional enzyme involved in key lipid biosynthesis pathways. It catalyzes the conversion of lysophosphatidylcholine to phosphatidylcholine and participates in platelet-activating factor (PAF) biosynthesis through acetyltransferase activity. The enzyme demonstrates preference for saturated fatty acyl-CoAs and plays crucial roles in pulmonary surfactant production and lipid droplet regulation. LPCAT1 localizes to multiple cellular membranes including the endoplasmic reticulum, Golgi apparatus, plasma membrane, and lipid droplets, adopting a single-pass type II membrane protein topology. Its presence in lipid droplets suggests important functions in lipid storage and metabolism, with potential monotopic topology in these organelles.