Recombinant LPCT4 protein (His tag)

Catalog Number	542869
Synonyms	1-acylglycerol-3-phosphate O-acyltransferase 7; 1-AGP acyltransferase 7; 1-AGPAT 7; 1-acylglycerophosphocholine O-acyltransferase; 1-acylglycerophosphoserine O-acyltransferase; 1-alkenylglycerophosphoethanolamine O-acyltransferase; 1-alkylglycerophosphocholine O-acetyltransferase; Acyltransferase-like 3; Lysophosphatidylcholine acyltransferase 4; Lysophosphatidylethanolamine acyltransferase 2; Plasmalogen synthase
Species	Human
Expression System	E. coli
Accession	Q643R3
Molecular Weight	Predictes a molecular mass of 43.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 43 kDa band.

Product Information

Sequence Region	108-487
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 108-487 aa (Q643R3) 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 Lysophospholipid acyltransferase LPCAT4 (fragment 108-487) is a high-purity protein fragment designed for structural and biochemical studies. This 380-amino acid construct retains key functional regions, offering a stable and soluble alternative for investigating acyltransferase mechanisms and lipid metabolism pathways. LPCAT4 is an endoplasmic reticulum membrane multi-pass protein that exhibits acyl-CoA-dependent lysophospholipid acyltransferase activity. It specifically converts lysophosphatidylethanolamine to phosphatidylethanolamine, lysophosphatidylcholine to phosphatidylcholine, and catalyzes the acylation of 1-alkenyl-lysophosphatidylethanolamine, lysophosphatidylglycerol, and alkyl-lysophosphatidylcholine. The enzyme demonstrates substrate specificity, showing no activity toward lysophosphatidylinositol, glycerol-3-phosphate, diacylglycerol, or lysophosphatidic acid, and preferentially utilizes long-chain acyl-CoAs (C16, C18) as acyl donors. This fragment represents a computationally selected stable domain suitable for elucidating the structural basis of its selective lipid remodeling functions.