Recombinant PLCD protein (His tag)

Catalog Number	543730
Synonyms	1-acylglycerol-3-phosphate O-acyltransferase 4; 1-AGP acyltransferase 4; 1-AGPAT 4; Lysophosphatidic acid acyltransferase delta; LPAAT-delta
Species	Human
Expression System	E. coli
Accession	Q9NRZ5
Molecular Weight	Predictes a molecular mass of 20.81 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	146-306
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 146-306 aa (Q9NRZ5) 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 AGPAT4 (1-acyl-sn-glycerol-3-phosphate acyltransferase delta) fragment (residues 146-306) is a high-quality protein designed for structural and biochemical studies. This fragment, computationally selected for stability and solubility, enables detailed investigation of the enzyme's role in phosphatidic acid biosynthesis, particularly its specificity for polyunsaturated fatty acids. The full-length AGPAT4 enzyme, encoded by the AGPAT4 gene in Homo sapiens, functions as a lysophosphatidic acid acyltransferase (LPAAT-delta) in the endoplasmic reticulum membrane. It catalyzes the conversion of 1-acyl-sn-glycerol-3-phosphate (lysophosphatidic acid) to 1,2-diacyl-sn-glycerol-3-phosphate (phosphatidic acid) by incorporating an acyl group at the sn-2 position of the glycerol backbone. Notably, AGPAT4 exhibits high specificity for polyunsaturated fatty acyl-CoA substrates, especially docosahexaenoyl-CoA (DHA-CoA), highlighting its potential role in lipid metabolism involving polyunsaturated fatty acids. As a multi-pass membrane protein localized to the endoplasmic reticulum, it contributes to the biosynthesis of phosphatidic acid, a key intermediate in phospholipid and triglyceride synthesis.