Recombinant PLPL3 protein (His tag)

Catalog Number	541358
Synonyms	Acylglycerol transacylase; Adiponutrin; ADPN; Calcium-independent phospholipase A2-epsilon; iPLA2-epsilon; Lysophosphatidic acid acyltransferase; Patatin-like phospholipase domain-containing protein 3
Species	Human
Expression System	E. coli
Accession	Q9NST1
Molecular Weight	Predictes a molecular mass of 23.14 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	63-255
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 63-255 aa (Q9NST1) 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 PNPLA3 (63-255) is a high-purity protein fragment of the multifunctional 1-acylglycerol-3-phosphate O-acyltransferase PNPLA3, specifically engineered for structural and biochemical studies. This 193-amino acid fragment represents a stable, soluble unit ideal for investigating the enzyme's complex lipid metabolism functions. The full-length PNPLA3 protein is a crucial metabolic enzyme that catalyzes the CoA-dependent acylation of 1-acyl-sn-glycerol 3-phosphate (2-lysophosphatidic acid) to generate phosphatidic acid, a key intermediate in both triglyceride and glycerophospholipid biosynthesis. PNPLA3 demonstrates specificity for long-chain fatty acyl-CoAs including arachidonoyl-CoA, linoleoyl-CoA, and oleoyl-CoA. Additionally, it possesses low triacylglycerol lipase, CoA-independent acylglycerol transacylase, and phospholipase A2 activities, suggesting roles in acyl-chain remodeling of triglycerides and lipid metabolism regulation. The enzyme localizes to membranes as a single-pass type II membrane protein and is also found in lipid droplets, indicating its importance in lipid storage and metabolism compartments.