Recombinant PLPL1 protein (His tag)

Catalog Number	545457
Synonyms	Patatin-like phospholipase domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q8N8W4
Molecular Weight	Predictes a molecular mass of 31.28 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	1-264
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 1-264 aa (Q8N8W4) 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 PNPLA1 (Patatin-like phospholipase domain-containing protein 1) Fragment (aa 1-264) - A high-quality protein fragment encompassing the complete PNPLA domain, ideal for investigating omega-hydroxyceramide transacylase activity and skin barrier lipid metabolism research. PNPLA1 encodes omega-hydroxyceramide transacylase (EC 2.3.1.296), a crucial enzyme in skin barrier formation. This protein catalyzes the final step in synthesizing omega-O-acylceramides (EOS) by transferring linoleic acid from triglycerides to omega-hydroxyceramides. These extremely hydrophobic lipids are essential for the biogenesis of lipid lamellae in the stratum corneum and the formation of the cornified lipid envelope, both critical for maintaining epidermal barrier function. Additionally, PNPLA1 plays a role in keratinocyte differentiation and may act on other lipid substrates including omega-hydroxylated ultra-long chain fatty acids and acylglucosylceramides. The protein localizes to the cytoplasm, where it performs its transacylase function in lipid metabolism pathways.