Recombinant GDPD1 protein (His tag)

Catalog Number	543152
Synonyms	Glycerophosphodiester phosphodiesterase 4; Glycerophosphodiester phosphodiesterase domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q8N9F7
Molecular Weight	Predictes a molecular mass of 13.27 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	217-314
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 217-314 aa (Q8N9F7) 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 Lysophospholipase D GDPD1 (EC 3.1.4.-) Fragment (residues 217-314) is a high-purity, soluble protein fragment derived from human GDPD1, designed for structural and biochemical studies. This 98-amino acid fragment retains key features of the full-length enzyme, which hydrolyzes lysoglycerophospholipids to produce bioactive lipids like lysophosphatidic acid (LPA) and N-acylethanolamines. Ideal for researchers investigating lipid metabolism and signaling pathways. The full-length GDPD1 protein, encoded by the GDPD1 gene in Homo sapiens, functions as a lysophospholipase D that hydrolyzes lysoglycerophospholipids, including lyso-PAF, lyso-PE, and lyso-PC, to generate lysophosphatidic acid (LPA) and corresponding amines. It plays a role in bioactive N-acylethanolamine biosynthesis from substrates like N-acyl-lysoPlsEt and N-acyl-lysoPE, and hydrolyzes glycerophospho-N-acylethanolamine to N-acylethanolamine. Notably, it lacks glycerophosphodiester phosphodiesterase activity and does not hydrolyze glycerophosphoinositol or glycerophosphocholine. Subcellularly, GDPD1 is localized in the cytoplasm, particularly the perinuclear region, and associates with membranes as a multi-pass membrane protein, with additional presence in the endoplasmic reticulum, indicating its involvement in intracellular lipid processing and signaling.