Recombinant GDE1 protein (His tag)

Catalog Number	543773
Synonyms	Glycerophosphoinositol glycerophosphodiesterase GDE1; Lysophospholipase D GDE1; Membrane-interacting protein of RGS16; RGS16-interacting membrane protein
Species	Human
Expression System	E. coli
Accession	Q9NZC3
Molecular Weight	Predictes a molecular mass of 26.79 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	25-247
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 25-247 aa (Q9NZC3) 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 Glycerophosphodiester phosphodiesterase 1 (GDE1) fragment (amino acids 25-247) is a high-purity protein designed for structural and biochemical studies. This 223-amino acid fragment, computationally selected for stability and solubility, enables researchers to investigate GDE1's enzymatic activities in glycerophosphodiester hydrolysis and its role in bioactive lipid metabolism, including endocannabinoid biosynthesis. Glycerophosphodiester phosphodiesterase 1 (GDE1) is a multi-pass membrane protein localized to the cell membrane and cytoplasmic vesicles in human cells. It functions as a key enzyme hydrolyzing glycerophosphodiesters such as glycerophosphoinositol and glycerophosphoethanolamine, producing glycerol phosphate and corresponding alcohols. Notably, GDE1 participates in bioactive N-acylethanolamine biosynthesis in the brain, generating important signaling molecules including the endocannabinoid anandamide, anti-inflammatory N-palmitoylethanolamine, and anorexic N-oleoylethanolamine. The enzyme also exhibits lysophospholipase D activity, though this is secondary to its primary glycerophosphodiester phosphodiesterase function. GDE1 shows substrate specificity, with minimal activity toward glycerophosphocholine, making it a crucial component in understanding glycerophosphodiester metabolism and lipid-mediated signaling pathways.