Recombinant NAPEP protein (His tag)

Catalog Number	545199
Synonyms	N-acyl phosphatidylethanolamine phospholipase D; NAPE-PLD; NAPE-hydrolyzing phospholipase D
Species	Human
Expression System	E. coli
Accession	Q6IQ20
Molecular Weight	Predictes a molecular mass of 41.22 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	53-393
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 53-393 aa (Q6IQ20) 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	This product is a high-quality recombinant fragment of human N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D (NAPE-PLD), encompassing amino acids 53-393. This 341-amino acid fragment is engineered for stability and solubility, making it an ideal tool for investigating the enzyme's role in generating bioactive N-acylethanolamines and studying lipid-mediated signaling pathways in biochemical and structural research. N-acyl-phosphatidylethanolamine-hydrolyzing phospholipase D (NAPE-PLD) is a D-type phospholipase that catalyzes the hydrolysis of N-acyl-phosphatidylethanolamines (NAPEs) to produce N-acylethanolamines/fatty acid ethanolamides (NAEs/FAEs) and phosphatidic acid. It primarily generates long-chain saturated and monounsaturated NAEs in the brain and is implicated in regulating neuronal survival through mechanisms such as RAC1 activation. Additionally, NAPE-PLD plays a critical role in lipid metabolism within adipose tissue, facilitating crosstalk between adipocytes, gut microbiota, and immune cells to modulate energy homeostasis, body temperature, and weight by promoting cold-induced brown or beige adipocyte differentiation. The enzyme is localized to the Golgi apparatus membrane, early endosome membrane, nuclear envelope, and nucleoplasm, where it associates with cellular membranes via interactions with phospholipids.