Recombinant PLD4 protein (His tag)

Catalog Number	543352
Synonyms	(S,S)-bis(monoacylglycero)phosphate synthase PLD4; Phospholipase D family member 4; Phospholipase D4
Species	Human
Expression System	E. coli
Accession	Q96BZ4
Molecular Weight	Predictes a molecular mass of 47.02 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	92-506
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 92-506 aa (Q96BZ4) 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 PLD4 (5'-3' Exonuclease) Fragment (aa 92-506) – a high-purity protein tool designed for studying the enzymatic activities and immune regulatory functions of the PLD phosphodiesterase domains. This fragment retains key functional regions for nucleic acid processing and phospholipid metabolism research. PLD4 is a multifunctional enzyme with 5'→3' exonuclease activity that hydrolyzes single-stranded DNA and RNA, displaying nucleotide-specific cleavage preferences that allow selective fragment preservation. It plays a critical role in innate immunity by processing self and pathogenic nucleic acids in endolysosomal compartments, regulating TLR7 and TLR9 activation to balance antiviral responses and prevent autoinflammation. Additionally, PLD4 functions as a transphosphatidylase that synthesizes (S,S)-bis(monoacylglycero)phosphate (BMP), the main phospholipid component of lysosomal intralumenal vesicles essential for lipid degradation and organelle homeostasis. The protein localizes to multiple cellular compartments including endoplasmic reticulum, Golgi apparatus, endosomes, phagosomes, and lysosomes, with nuclear-to-phagosomal translocation observed during microglial activation. The recombinant fragment (aa 92-506) contains both PLD phosphodiesterase domains, making it ideal for investigating these dual enzymatic functions in immune signaling and lipid metabolism pathways.