Recombinant PLCD3 protein (His tag)

Catalog Number	545427
Synonyms	Phosphoinositide phospholipase C-delta-3; Phospholipase C-delta-3; PLC-delta-3
Species	Human
Expression System	E. coli
Accession	Q8N3E9
Molecular Weight	Predictes a molecular mass of 51.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	55-485
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 55-485 aa (Q8N3E9) 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 PLCD3 Fragment (aa 55-485) is a high-purity protein designed for studying the catalytic and regulatory domains of Phospholipase C-delta-3. This fragment encompasses the complete PH, EF-hand, and PI-PLC X-box domains, enabling targeted investigation of phosphatidylinositol 4,5-bisphosphate hydrolysis and downstream signaling pathways. The full-length 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase delta-3 (PLCD3) hydrolyzes phosphatidylinositol 4,5-bisphosphate (PIP2) to generate second messengers diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3), which activate protein kinase C and release calcium from intracellular stores. It is essential for trophoblast and placental development and participates in cytokinesis by hydrolyzing PIP2 at the cleavage furrow. The protein localizes to membranes and the cytoplasm, particularly accumulating at the cleavage furrow during cell division, and regulates neurite outgrowth through RhoA/Rho kinase signaling inhibition.