Recombinant PLCE1 protein (His tag)

Catalog Number	548427
Synonyms	Pancreas-enriched phospholipase C; Phosphoinositide phospholipase C-epsilon-1; Phospholipase C-epsilon-1; PLC-epsilon-1
Species	Human
Expression System	E. coli
Accession	Q9P212
Molecular Weight	Predictes a molecular mass of 57.58 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 58 kDa band.

Product Information

Sequence Region	1751-2239
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1751-2239 aa (Q9P212) 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 PLCE1 Fragment (1751-2239) is a high-purity protein designed for studying the C2 and Ras-associating domains of 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase epsilon-1. This 489-amino acid fragment provides an essential tool for investigating phospholipase C signaling, RasGEF activity, and cytoskeletal regulation in cellular models. The full-length PLCE1 protein is a bifunctional enzyme that hydrolyzes phosphatidylinositol 4,5-bisphosphate to generate second messengers diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3). Additionally, it functions as a Ras guanine-exchange factor (RasGEF), regulating small GTPases and serving as an effector for heterotrimeric and small G-proteins. PLCE1 plays critical roles in cell survival, growth, actin organization, T-cell activation, and lamellipodia formation in podocytes through its interaction with the ARP2/3 complex. The protein localizes to multiple cellular compartments including the cytoplasm, cytosol, plasma membrane, Golgi apparatus membrane, and lamellipodia, with specific recruitment to membranes by activated HRAS, RAP2, and RAP1A.