Recombinant CDS1 protein (His tag)

Catalog Number	543322
Synonyms	CDP-DAG synthase 1; CDP-DG synthase 1; CDP-diacylglycerol synthase 1; CDS 1; CDP-diglyceride pyrophosphorylase 1; CDP-diglyceride synthase 1; CTP:phosphatidate cytidylyltransferase 1
Species	Human
Expression System	E. coli
Accession	Q92903
Molecular Weight	Predictes a molecular mass of 11.31 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	378-461
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 378-461 aa (Q92903) 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 Phosphatidate Cytidylyltransferase 1 (CDS1) Fragment (residues 378-461) is a high-quality, 84-amino acid protein fragment designed for structural and biochemical studies. This fragment, derived from the essential enzyme CDP-diacylglycerol synthase 1, offers researchers a stable and soluble unit ideal for investigating lipid biosynthesis pathways and enzyme mechanisms. Phosphatidate cytidylyltransferase 1 (CDS1) catalyzes the conversion of phosphatidic acid to CDP-diacylglycerol, a critical intermediate in synthesizing key phospholipids including phosphatidylglycerol, cardiolipin, and phosphatidylinositol. The enzyme exhibits broad substrate specificity with minimal acyl chain preference for phosphatidic acid. Beyond its fundamental role in phospholipid metabolism, CDS1 regulates lipid droplet growth and positively influences adipocyte differentiation and development. The full-length protein localizes to the endoplasmic reticulum membrane as a multi-pass membrane protein, underscoring its integral role in cellular lipid homeostasis and energy metabolism.