Recombinant DPS1 protein (His tag)

Catalog Number	545152
Synonyms	All-trans-decaprenyl-diphosphate synthase subunit 1; Decaprenyl pyrophosphate synthase subunit 1; Decaprenyl-diphosphate synthase subunit 1; Solanesyl-diphosphate synthase subunit 1; Trans-prenyltransferase 1; TPT 1
Species	Human
Expression System	E. coli
Accession	Q5T2R2
Molecular Weight	Predictes a molecular mass of 37.69 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	93-415
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 93-415 aa (Q5T2R2) 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 protein fragment of Human All trans-polyprenyl-diphosphate synthase PDSS1 (residues 93-415), designed for structural and biochemical studies. The fragment represents a stable, soluble unit of the enzyme, which is essential for synthesizing prenyl diphosphate precursors in ubiquinone biosynthesis. The full-length PDSS1 protein is a heterotetrameric enzyme that catalyzes the sequential condensation of farnesyl diphosphate (FPP) and isopentenyl diphosphate (IPP) to produce prenyl diphosphates with trans stereochemistry. It plays a critical role in generating nonaprenyl and decaprenyl diphosphates, which are key precursors for the side chains of ubiquinone-9 (Q9) and ubiquinone-10 (Q10), respectively. These isoprenoid quinones are vital for mitochondrial electron transport and cellular energy production. The enzyme is localized to the mitochondrion, underscoring its importance in mitochondrial function and metabolic pathways.