Recombinant CPTP protein (His tag)

Catalog Number	538210
Synonyms	CPTP; Glycolipid transfer protein domain-containing protein 1; GLTP domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q5TA50
Molecular Weight	Predictes a molecular mass of 26.02 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-214
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-214 aa (Q5TA50) 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 Ceramide-1-phosphate Transfer Protein (CPTP) Fragment (residues 1-214) is a highly purified protein designed for structural and functional studies. This fragment encompasses the complete GLTP domain, offering a stable and soluble unit ideal for investigating C1P lipid transfer mechanisms, Golgi structure regulation, and roles in autophagy and inflammasome signaling. CPTP, also known as GLTP domain-containing protein 1, mediates the intracellular transfer of ceramide-1-phosphate (C1P) between organelle membranes and the cell membrane. It is essential for maintaining normal Golgi stack structure and regulates cellular C1P levels, which in turn influences phospholipase PLA2G4A activity and arachidonic acid release. CPTP exhibits specificity for phosphoceramides with saturated C16:0 or monounsaturated C18:1 aliphatic chains and is stimulated by phosphatidylserine. Beyond lipid transfer, it plays critical roles in autophagy, inflammasome-mediated IL1B and IL18 processing, and pyroptosis, without affecting apoptosis. The protein localizes to multiple cellular compartments, including the cytosol, trans-Golgi network, cell membrane, endosomes, and the outer nuclear membrane, functioning as a peripheral membrane protein on the cytoplasmic side.