Recombinant ALG12 protein (His tag)

Catalog Number	534837
Synonyms	7; 2; Asparagine-linked glycosylation protein 12 homolog; Dolichyl-P-Man:Man(7)GlcNAc(2)-PP-dolichyl-alpha-1,6-mannosyltransferase; Mannosyltransferase ALG12 homolog
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q23361
Gene ID	179185
Molecular Weight	Predictes a molecular mass of 17.42 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	360-492
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 360-492 aa (Q23361) 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 protein fragment of Dol-P-Man:Man(7)GlcNAc(2)-PP-Dol alpha-1,6-mannosyltransferase (ALG12 homolog) from Caenorhabditis elegans, corresponding to residues 360-492. This fragment is a stable, soluble unit ideal for structural studies and biochemical assays investigating mannosyltransferase activity in N-glycosylation pathways. The full-length ALG12 protein is a key endoplasmic reticulum membrane mannosyltransferase involved in asparagine-linked glycosylation. It catalyzes the alpha-1,6-linked addition of the eighth mannose residue to the Man(7)GlcNAc(2)-PP-dolichol intermediate during dolichol-linked oligosaccharide biosynthesis. These glycan precursors are essential for proper protein N-glycosylation, a critical post-translational modification affecting protein folding, quality control, and cellular function. As a multi-pass membrane protein localized to the endoplasmic reticulum, ALG12 operates in the luminal phase of oligosaccharide assembly, contributing to the generation of the mature Man(8)GlcNAc(2)-PP-dolichol structure required for subsequent transfer to nascent proteins.