Recombinant ALG13 protein (His tag)

Catalog Number	541315
Synonyms	Asparagine-linked glycosylation 13 homolog; Glycosyltransferase 28 domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q9NP73
Molecular Weight	Predictes a molecular mass of 21.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	216-390
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 216-390 aa (Q9NP73) 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 UDP-N-acetylglucosamine transferase subunit ALG13 fragment (residues 216-390), encompassing the complete OTU domain. This high-purity protein is an essential tool for investigating the catalytic mechanisms and functional roles of ALG13 in N-glycosylation pathways, enabling targeted biochemical and structural studies. The full-length ALG13 protein, encoded by the ALG13 gene (UniProt ID: Q9NP73), functions as the catalytic subunit of the UDP-N-acetylglucosamine transferase complex in the endoplasmic reticulum membrane. It plays a critical role in the biosynthetic pathway of dolichol-linked oligosaccharides, which serve as glycan precursors for protein asparagine (N)-glycosylation. Specifically, the ALG13/ALG14 dimer catalyzes the second step of dolichol pyrophosphate biosynthesis, transferring a beta1,4-linked N-acetylglucosamine from UDP-GlcNAc to GlcNAc-pyrophosphatedolichol to produce N,N'-diacetylchitobiosyl diphosphodolichol. This reaction is vital for subsequent steps in oligosaccharide assembly, ultimately supporting protein glycosylation processes essential for cellular function. The subcellular localization of ALG13 isoform 2 is on the cytosolic face of the endoplasmic reticulum membrane, where it is recruited via interaction with ALG14, highlighting its importance in early glycan synthesis.