Recombinant ALG14 protein (His tag)

Catalog Number	543370
Synonyms	Asparagine-linked glycosylation 14 homolog
Species	Human
Expression System	E. coli
Accession	Q96F25
Molecular Weight	Predictes a molecular mass of 23.32 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	25-216
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 25-216 aa (Q96F25) 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 recombinant protein represents a stable, soluble fragment (amino acids 25-216) of human UDP-N-acetylglucosamine transferase subunit ALG14, a key enzyme in the N-glycosylation pathway. The carefully selected fragment maintains structural integrity while offering enhanced experimental utility for biochemical and structural studies of protein glycosylation mechanisms. ALG14 is an essential component of the UDP-N-acetylglucosamine transferase complex located in the endoplasmic reticulum membrane. As a single-pass membrane protein, it functions as a critical adapter that recruits ALG13 to the cytoplasmic face of the endoplasmic reticulum. Together, this complex catalyzes the second step in dolichol-linked oligosaccharide biosynthesis, specifically transferring N-acetylglucosamine from UDP-GlcNAc to GlcNAc-pyrophosphatedolichol to form N,N'-diacetylchitobiosyl diphosphodolichol. This reaction represents a fundamental early stage in the assembly of glycan precursors used for protein asparagine (N)-glycosylation, a crucial post-translational modification affecting protein folding, stability, and function. The full-length protein's role in this conserved biosynthetic pathway makes it a valuable target for studying glycosylation disorders and related cellular processes.