Recombinant ALG5 protein (His tag)

Catalog Number	546343
Synonyms	DolP-glucosyltransferase; Asparagine-linked glycosylation protein 5 homolog
Species	Human
Expression System	E. coli
Accession	Q9Y673
Molecular Weight	Predictes a molecular mass of 35.89 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	29-324
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 29-324 aa (Q9Y673) 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 Dolichyl-phosphate beta-glucosyltransferase (ALG5) Fragment (aa 29-324) – a high-purity, stable protein fragment ideal for investigating the critical role of ALG5 in dolichol-linked oligosaccharide biosynthesis and protein N-glycosylation pathways. Dolichyl-phosphate beta-glucosyltransferase (ALG5) is a key enzyme in the endoplasmic reticulum membrane, where it catalyzes the formation of dolichyl beta-D-glucosyl phosphate (Dol-P-Glc) as part of the asparagine-linked glycosylation pathway. This process is essential for assembling glycan precursors (dolichol-linked oligosaccharides) that are transferred to nascent proteins, ensuring proper protein folding and function. ALG5 operates on the cytoplasmic side of the endoplasmic reticulum, providing the glucose donor substrate for subsequent enzymes (ALG6, ALG8, and ALG10) in the lumen, ultimately producing the Glc(3)Man(9)GlcNAc(2)-PP-Dol structure required for protein N-glycosylation. The recombinant fragment (aa 29-324) is designed for structural and biochemical studies, enabling researchers to explore ALG5's mechanistic role in glycosylation without membrane-associated complexities.