Recombinant PIGB protein (His tag)

Catalog Number	540898
Synonyms	GPI mannosyltransferase III; GPI-MT-III; Phosphatidylinositol-glycan biosynthesis class B protein; PIG-B
Species	Human
Expression System	E. coli
Accession	Q92521
Molecular Weight	Predictes a molecular mass of 18.86 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	408-554
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 408-554 aa (Q92521) 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 GPI alpha-1,2-mannosyltransferase 3 (PIGB) Fragment (aa 408-554) is a high-purity, soluble protein fragment derived from human GPI mannosyltransferase III. This 147-amino acid fragment is engineered for structural and biochemical studies, enabling researchers to investigate the enzyme's role in glycosylphosphatidylinositol (GPI)-anchor biosynthesis without the challenges of full-length membrane protein expression. The full-length GPI alpha-1,2-mannosyltransferase 3 (PIGB) is an endoplasmic reticulum membrane-bound enzyme essential for GPI-anchor biosynthesis. It functions as an alpha-1,2-mannosyltransferase, catalyzing the transfer of the third mannose from dolichol-phosphate-mannose to GPI intermediates, specifically generating the H6 intermediate in the ninth step of the pathway. This process is critical for anchoring proteins to cell membranes, impacting cell signaling and adhesion. As a multi-pass membrane protein localized to the endoplasmic reticulum, PIGB plays a key role in post-translational modifications, and its dysfunction is linked to GPI biosynthesis disorders. The recombinant fragment (aa 408-554) provides a stable, soluble unit for elucidating the enzyme's catalytic mechanisms and interactions.