Recombinant TMTC3 protein (His tag)

Catalog Number	545272
Synonyms	Protein SMILE; Transmembrane O-mannosyltransferase targeting cadherins 3; Transmembrane and tetratricopeptide repeat-containing 3
Species	Human
Expression System	E. coli
Accession	Q6ZXV5
Molecular Weight	Predictes a molecular mass of 47.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	424-821
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 424-821 aa (Q6ZXV5) 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 TMTC3 (424-821) Fragment is a high-purity, stable protein fragment derived from the Protein O-mannosyl-transferase TMTC3. This 398-amino acid segment is engineered for solubility and structural integrity, making it an ideal tool for studying O-mannosylation mechanisms, cadherin glycosylation, and endoplasmic reticulum stress responses in biochemical and structural research applications. Protein O-mannosyl-transferase TMTC3 (EC 2.4.1.109) is a transmembrane enzyme that transfers mannosyl residues to serine or threonine hydroxyl groups, primarily targeting cadherin superfamily proteins to decorate them with O-linked mannose glycans. It also modifies other substrates like PDIA3 and plays a critical role in positively regulating proteasomal degradation within the endoplasmic reticulum (ER), thereby controlling ER stress response. The full-length protein is localized to the ER membrane as a multi-pass membrane protein, where it colocalizes with PDIA3, underscoring its importance in protein quality control and cellular stress management. This fragment represents a soluble, functional unit optimized for experimental studies.