Recombinant FKTN protein (His tag)

Catalog Number	537282
Synonyms	Fukutin; Fukuyama-type congenital muscular dystrophy protein; Ribitol-5-phosphate transferase
Species	Human
Expression System	E. coli
Accession	O75072
Molecular Weight	Predictes a molecular mass of 52.12 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	29-461
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 29-461 aa (O75072) 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 product features a stable and soluble fragment (residues 29-461) of human Ribitol-5-phosphate transferase FKTN (Fukutin). It is designed for structural and biochemical studies, enabling researchers to investigate the enzymatic activity and molecular interactions of this key protein involved in glycosylation pathways and muscular dystrophy pathology. Fukutin (FKTN) is a Golgi apparatus membrane-localized enzyme that catalyzes the transfer of ribitol-phosphate from CDP-ribitol to the phosphorylated O-mannosyl trisaccharide on alpha-dystroglycan. This reaction constitutes the critical first step in forming the ribitol 5-phosphate tandem repeat, which links the carbohydrate structure to the ligand-binding moiety. The protein plays an essential role in muscle membrane complex formation and brain development, with mutations in FKTN directly linked to Fukuyama-type congenital muscular dystrophy. Its proper function is required for normal localization and activity of POMGNT1 in Golgi membranes, highlighting its central position in the dystroglycan glycosylation pathway.