Recombinant B3GN7 protein (His tag)

Catalog Number	545484
Synonyms	BGnT-7; Beta-1,3-Gn-T7; Beta-1,3-N-acetylglucosaminyltransferase 7; Beta3Gn-T7
Species	Human
Expression System	E. coli
Accession	Q8NFL0
Molecular Weight	Predictes a molecular mass of 39.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	79-401
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 79-401 aa (Q8NFL0) 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 product is a recombinant fragment of human UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 7 (BGnT-7), encompassing amino acids 79-401. It represents a stable, soluble unit ideal for investigating the enzyme's role in keratan sulfate biosynthesis, supporting structural studies and functional assays in glycosylation research. BGnT-7 is a key N-acetylglucosaminyltransferase that catalyzes the transfer of GlcNAc via a beta1->3 linkage to galactose residues, facilitating the elongation of keratan sulfate proteoglycans. It collaborates with galactosyltransferases and sulfotransferases to construct and extend sulfated disaccharide units in these polymers. This enzyme is critical for N-linked keratan sulfate biosynthesis in the cornea, influencing proteoglycan organization and transparency, and may help maintain tissue architecture by inhibiting cellular motility and invasion. BGnT-7 is localized to the Golgi apparatus membrane as a single-pass type II membrane protein, underscoring its role in post-translational modifications within the secretory pathway.