Data Sheet (Cat.No.TMPY-03262)

TargetMol

B3GNT6 Protein, Human, Recombinant (aa 44-384, His)

General Information

Synonyms:	BGnT-6;UDP-GlcNAc:βGal β-1,3-N-acetylglucosaminyltransferase 6;β-1,3-Gn-T6;beta-1,3-Gn-T6;beta3Gn-T6;B3Gn-T6;β3Gn-T6;UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 6
Protein Construction:	A DNA sequence encoding the human B3GNT6 (NP_619651.3)(Gln44-Ser384) was fused with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	A8K9Q8
Molecular Weight:	40 kDa (predicted); 47 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 8.0, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

B3GNT6 belongs to the glycosyltransferase 31 family. B3GNT6 play s an important role in the synthesis of mucin-type O-glycans in digestive organs. It catalyzes the transfer of GlcNAc from UDP-GlcNAc to GalNAcalpha1-Ser/Thr (Tn antigen) to form the core 3 structure (GlcNAcbeta1-3GalNAcalpha1-Ser/Thr). Core 3 structure exists in O-

glycan which is an important precursor in the biosynthesis of mucin-type glycoproteins. Loss of core 3 could lead to the production of secreted mucins, then bacteria would be inefficiently cleared from the system, and chronic inflammation would be developed, which eventually would result in development of cancer. B3GNT6 gene is a tumor suppressor gene.

Reference

Hennet T, et al. (1998) Genomic cloning and expression of three murine UDP-galactose: beta-N-acetylglucosamine beta1,3-galactosyltransferase genes. J Biol Chem. 273(1):58-65.
Kolbinger F, et al. (1998) Cloning of a human UDP-galactose:2-acetamido-2-deoxy-D-glucose 3beta-galactosyltransferase catalyzing the formation of type 1 chains. J Biol Chem. 273(1): 433-40.
Henrissat B, et al. (1997) A classification of nucleotide-diphospho-sugar glycosyltransferases based on amino acid sequence similarities. Biochem J. 326:929-39.

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