Data Sheet (Cat.No.TMPY-02371)

TargetMol

ST6GAL1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	ST6 β-galactosamide α-2,6-sialyltranferase 1;St6galI;ST6 beta-galactosamide alpha-2,6-sialyltranferase 1;Siat1;St6Gal-I;AW742324;ST6 beta-galactosamide α-2,6-sialyltranferase 1;St6gal
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse ST6GAL1 (NP_666045.1) (Lys 27-Cys 403) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q64685
Molecular Weight:	45.9 kDa (predicted); 50-55 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to transfer Neu5Ac from CMP-Neu5Ac to N-Acetyllactosamine. The specific activity is > 150 pmol/min/μg.
Purity:	> 96 % 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, 120 mM NaCl, pH7.5. 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

Beta-galactoside alpha-2,6-sialyltransferase 1, also known as B-cell antigen CD75, Sialyltransferase 1, CMP-N-acetylneuraminate-beta-galactosamide-alpha-2,6-sialyltransferase 1, ST6GAL1 and SIAT1, is a single-pass type II membrane protein that belongs to the glycosyltransferase 29 family. Sialyltransferases are key enzymes in the

biosynthesis of sialoglycoconjugates that catalyze the transfer of sialic residue from its activated form to an oligosaccharidic acceptor. ST6GAL1 / SIAT1 is normally found in the Golgi but can be proteolytically processed to a soluble form. It is involved in the generation of the cell-surface carbohydrate determinants and differentiation antigens HB-6, CDw75, and CD76. β-Galactoside α2,6-sialyltransferases ST6GAL1 and ST6GAL2 are the two unique members of the ST6GAL family described in higher vertebrates. ST6GAL1 / SIAT1 transfers sialic acid from the donor of substrate CMP-sialic acid to galactose containing acceptor substrates.

Reference

Collins,B.E. et al., 2006, Nat Immunol. 7(2):199-206.
Videira,P.A. et al., 2008, Glycoconj J. 25(3): 259-68.
Petit,D. et al., 2010, J Biol Chem. 285(49): 38399-414.
Kroes,R.A. et al., 2010, Proc Natl Acad Sci USA.107(28):12646-51.

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