

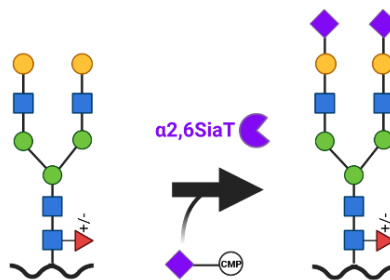
α 2,6SiaT

alpha-2,6-sialyltransferase

- For research use only. Not for use in diagnostic procedures. -

Product description

This recombinant bacterial α -2,6-sialyltransferase (α 2,6SiaT) is expressed in E. coli BL21(DE3) and is designed for sialylation of glycoproteins, glycolipids, and free glycans (including oligosaccharides). It catalyzes the transfer of sialic acid from CMP-Neu5Ac (or other CMP-Neu5Ac analogues) to terminal galactose residues in a α -2,6 linkage. Compared to other known α 2,6SiaTs, this enzyme has suppressed hydrolytic activities, resulting in enhanced synthesis efficiency



Unit definition (U) (standard enzyme unit): One unit is defined as the formation of 1 μ mol Neu5Ac- α -2,6-lactose (6'SL) from CMP-Neu5Ac (1 mM) and lactose (1 mM) per minute at 37 °C at pH 8.0.

Enzymatic activity characterisation

- Donor substrate: CMP-Neu5Ac
- Acceptor substrate: Glycans with terminal galactose
- Reaction conditions: pH 6.5–8.0; 25–37 °C
- Transferase activity: α -2,6-sialyltransferase
- Hydrolytic activity: Trace
- Sialidase activity: Undetectable

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Technical specifications

Parameter	Specification
Molecular weight	45 kDa
Expression host	<i>E. coli</i> BL21(DE3)
Purity (SDS-PAGE)	> 90 %
Purification tag:	His-tag
Form:	Lyophilized powder (MOPS and NaCl)
Reconstitution	Add 10–100 μ L deionized water
Store at:	-20 °C

MW (kDa)

250-

130-

100-

70-

55-

35-

25-

L: Protein Ladder E: Enzyme

Figure 1: SDS-PAGE analysis of purified enzyme

Activity validation

<p>The activity of the enzyme was validated on the following substrates</p> <ul style="list-style-type: none">• Free G2F glycans• Rituximab (in combination with β1,4-GalT) <p>Assay method: Capillary gel electrophoresis with laser-induced fluorescence</p>	<p>Figure 2: Activity test on a free <i>N</i>-glycans (G2F)</p>
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Application examples

- For the sialylation of a wide range of glycans: G2F, G2, lactose, LNT, LNnT, etc.
- For the sialylation of glycoproteins: Rituximab (in combination with β 1,4-GalT), Erythropoietin (EPO) for terminal sialylation, Fc-fusion proteins for enhanced serum half-life
- Glycan arrays for binding studies

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