α1,3GalT

alpha-1,3-galactosyltransferase

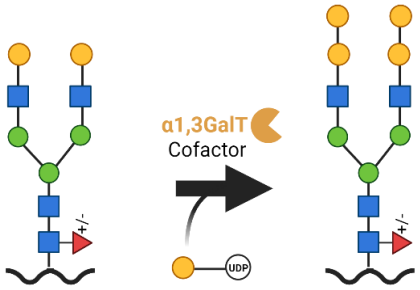
- For research use only. Not for use in diagnostic procedures -

Product description

Recombinant α-1,3-Galactosyltransferase (α1,3GalT) from bovine origin expressed in *E. coli* enables in vitro galactosylation of glycoproteins. The enzyme catalyzes the transfer of galactose from UDP-galactose to biantennary N-glycans with terminal galactose residues, forming α-1,3-linkages. The enzyme is for Research Use Only. Not for use in diagnostic procedures.

5 EqU are suitable to catalyze the in vitro galactosylation of 100 µg glycoprotein

50 EqU are suitable to catalyze the in vitro galactosylation of 1 mg glycoprotein



It contains:

Enzyme	5 or 50 EqU*

* Equivalent Unit (EqU) definition: Is the amount of enzyme required to achieve complete conversion of 3 pmol of G2F to G2FG2 in 24 h at 25 °C.

Enzymatic activity characterisation

- Donor substrate: UDP-galactose
- Acceptor substrate: Glycans with terminal galactose
- Reaction conditions: pH 6.5–8.0; 25–37 °C
- Transferase activity: α-1,3-galactosyltransferase
- Reaction conditions: Recommended pH 6.6, 20°C

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Technical specifications

Parameter	Specification
Molecular weight	35 kDa
Expression host	*E. coli* BL21(DE3)
Purity (SDS-PAGE)	> 90 %
Purification tag	His-tag
Form	Lyophilized powder (MOPS and NaCl)
Reconstitution	Add 10–100 µL deionized water
Store at	-20 °C

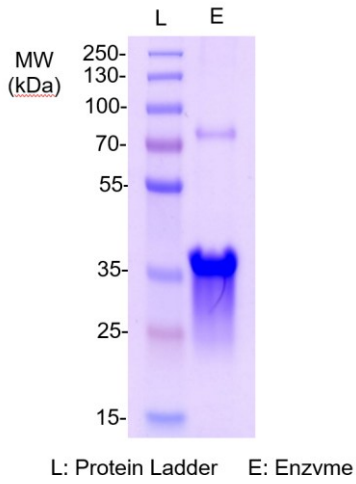

Figure 1: SDS-PAGE analysis of purified enzyme

Activity validation

The activity of the enzyme was validated on the following substrates

- Free G2F glycans (see Figure 2)
- Recombinant Influenza HA expressed in Sf9 cells

Assay Method: Capillary gel electrophoresis with laser-induced fluorescence

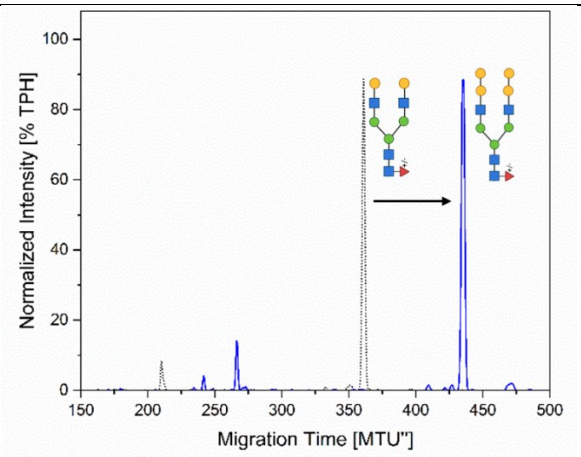

Figure 2: Activity test on a free *N*-glycan (G2F)

Application examples

- Glycoengineering of glycoproteins
- Glycan structure-function studies
- Biopharmaceutical glycoform optimization
- Development of glycan-based therapeutics
- Enzymatic synthesis of glycan standards
- Functional glycomics research

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