Selectin Biosciences Inc.

α (1-3,6) Galactosidase

α(1-3,6) Galactosidase (α-D-galactoside galactohydrolase, EC 3.2.1.22) cleaves α(1-3)- and α(1-6)-linked, non-reducing terminal galactose from complex carbohydrates and glycoproteins. There is no activity on α(1-4)-linked galactose. It is particularly efficient for removing α-linked galactose under conditions where the pH must be neutral or above, for example, with living cells.

α(1-3,6) Galactosidase is useful for:

- Structural analysis of oligosaccharides
- Xenograft transplantation studies
- Removing heterogeneity from glycoproteins

α(1-3,6) Galactosidase is isolated from a strain of *E. coli* expressing a cloned gene from *E. coli*.

Product Code: GE 81

Specifications

Activity: 30 U/mg, 400 U/mL

Storage: Store at 4°C. Do not freeze.

Formulation: The enzyme is provided as a sterile-filtered solution in 50 *mM* sodium phosphate pH 7.5.

Stability: Stable at least 12 months when stored properly. Several days exposure to ambient temperature will not reduce activity.

Product Description

Molecular weight: ~80,000 Daltons

Purity: α(1-3,6) galactosidase is tested for contaminating protease as follows; 10 μg of denatured BSA is incubated for 24 hours at 37°C with 2 μL of enzyme. SDS-PAGE analysis of the treated BSA shows no evidence of degradation.

The production host strain has been extensively tested and does not produce any detectable glycosidases.

Specificity: Non-reducing terminal α(1-3)- and α(1-6)-linked galactose. There is no activity on α(1-4)-linked galactose.

Assay

One unit of α(1-3,6) galactosidase activity is defined as the amount of enzyme required to produce 1 μmole of *p*-nitrophenol (*p*NP) in 1 minute at 25°C, pH 6.5 from *p*-nitrophenyl-α-D-galactopyranoside.

Reagents:

- 5X Reaction Buffer 6.5 - 250 mM sodium phosphate pH 6.

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Suggestions for Use

Procedure For De-galactosylation

1. Add up to 100 µg of glycoprotein or 1 nmol of oligosaccharide to tube.
2. Add deionized water to a total of 14 µL
3. Add 4 µL of 5X Reaction Buffer 6.5.
4. Add 2 µL α(1-3,6) galactosidase.
5. Incubate at 37°C for 1 hour. Longer incubations are necessary if fucose is present on the penultimate sugar.

References

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