



Alpha-(1-3,6)-Galactosidase

α -D-galactoside galactohydrolase, melibiase.

Alpha Galactosidase from *E. coli* cleaves $\alpha(1-3)$ - and $\alpha(1-6)$ -linked, non-reducing terminal galactose from complex carbohydrates and glycoproteins. There is no activity on $\alpha(1-4)$ 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.

Applications

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

Source

Recombinant from *E. Coli* in *E.Coli*

Catalog Number

E-AG02	60 μ l
E-AG02-20	20 μ l
E-AG02-200	200 μ l

Specific Activity 30 U/mg

Activity 400 U/ml

Molecular Weight ~80,000 daltons

Contents

Alpha galactosidase in 50 mM sodium phosphate, pH 7.5

included with 20 μ L and 60 μ l pack sizes:

Reaction buffer - 250mM Sodium phosphate, pH 6.5

Specificity

Non-reducing terminal alpha-(1-3)- and alpha-(1-6)-galactose. There is no activity on alpha-(1-4)-galactose.

Stability

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

Storage

Store enzyme at 4°C. Do not freeze.

Specific Activity

One unit of alpha-(1-3,6) Galactosidase is defined as the amount of enzyme required to produce 1 μ mole of p-nitrophenol (pNP) in 1 minute at 25°C pH 6.5 from p-nitrophenyl-alpha-D-galactopyranoside.

Purity

$\alpha(1-3,6)$ galactosidase is tested for contaminating protease as follows; 10 μ g of denatured BSA is incubated for 24 hours at 37°C with 2 μ L 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. of the BSA band after SDS-PAGE should show no evidence of degradation.

Alpha-(1-3,6)-Galactosidase Specifications - Protocol

Directions for use

1. Add up to 100 µg of asialoglycoprotein or 1 nmol of oligosaccharide to tube.
2. Add water to 13 µl and 4 µl 5X Reaction Buffer.
3. Add 2 µl alpha-(1-3,6)-Galactosidase.
4. Incubate at 37°C for 1 hour. Longer incubations are necessary if fucose is present on the penultimate sugar.

References

- Kobata, A. Use of endo- and exoglycosidases for structural studies of glycoconjugates. *Anal Biochem* 100: 1-14 (1979).
- Prime, S. J. Dearnley, A.M. Venton, R.B. Parekh and C.J. Edge. Oligosaccharide sequencing based on exo- and endoglycosidase digestion and liquid chromatographic analysis of the products. *J Chromatogr A* 720: 263-274 (1996)
- Dwek, R.A. , C.J. Edge, D.J. Harvey, M.R. Wormald and R.B. Parekh. Analysis of glycoprotein-associated oligosaccharides. *Ann Rev Biochem* 62: 65-100.
- Schmid K, Schmitt R. Raffinose metabolism in *Escherichia coli* K12. Purification and properties of a new alpha-galactosidase specified by a transmissible plasmid. *Eur J Biochem*: 67(1):95-104 (1976)

Warranties and liabilities

QA-Bio warrants that the above product conforms to the specifications described herein. Should the product fail for reasons other than through misuse QA-Bio will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive and QA-Bio makes no other warrants, expressed or implied, including any implied conditions or warranties of merchantability or fitness for any particular purpose.

For research use only

Updated on June 3, 2020