ß-N-acetylglucosaminidase
Glucosaminidase

Source
recombinant from *Streptococcus pneumoniae* in *E. Coli*

Catalog Number
E-GL01

Certification of Analysis Lot Number
502.1A

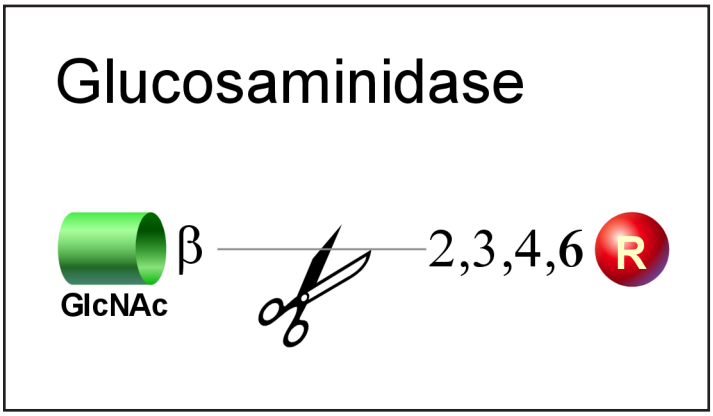
EC
3.2.1.30

Contents
1 vial: ß-N-acetylglucosaminidase
1 vial: 5x Reaction buffer
250mM Sodium phosphate, pH 5

Specific Activity >50 U/mg
Activity >80 U/ml

Application
•Structural analysis of oligosaccharides
•Distinguishing different N-acetyl glucosamine linkages
•Distinguishing between N-acetyl glucosamine and N-acetylgalactosamine
•Removing heterogeneity from glycoproteins

Molecular Weight ~140,000 daltons
pH optimum 5.0, active over the range 5-7



Specific Activity
One unit of QA-Bio ß-N-acetylglucosaminidase is defined as the amount of enzyme required to produce 1 µmole of p-nitrophenol (pNP) in 1 minute at 37°C, pH 5.0 from p-nitrophenyl-ß-D-N-acetyl-glucosaminide
Specificity
All non-reducing terminal ß-linked N-acetylglucosamine. Bisecting GlcNAc slows the reaction.

Formulation
The enzyme is provided as a sterile-filtered solution in 20 m*M* Tris-HCl, 175 m*M* NaCl (pH 7.5).

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.

Purity
QA-Bio ß-N-acetylglucosaminidase is tested for contaminating protease as follows: 10 µg of denatured BSA is incubated at 37°C for 24 hours 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.

E-GL01 ß-N-Glucosaminidase

Specifications - Protocol

QA-Bio
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Directions for use

1. Add up to 100 µg of asialogalacto-glycoprotein or 1 nmol of oligosaccharide to tube.

2. Add de-ionized water to a total of 14 µl.

3. Add 4 µl 5x Reaction Buffer 5.0.

4. Add 2 µl ß-N-acetylglucosaminidase
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5. Incubate at 37°C for 3 hours. If bisecting GlcNAc is present, incubation time should be increased to 12 hours.

Progress may be monitored by SDS-PAGE if the size differential between native and de-glycosylated protein is sufficient for detection.

References

Clarke, V. A., N. Platt and T.D. Betters. Cloning and expression of the beta-N-acetylglucosaminidase gene from Steptococcus pneumoniae. Generation of truncated enzymes with modified aglyconn specificity. J Biol Chem 270:8805-8814 (1995).

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 (1993).

Glasgow, L.R., J.C. Paulson and R.L. Hill. Systematic purification of five glycosidases from Streptococcus pneumoniae. J Biol Chem 252: 8615-8623(1977).

Kobata, A. Use of endo- and exoglycosidases for structural studies of glycoconjugates. Anal Biochem 100: 1-14 (1979).

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Warranties and liabilities

QA-Bio, LLC warrants that the above product conforms to the specifications described herein. Should the product fail for reasons other than through misuse QA-Bio, LLC will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive and QA-Bio, LLC makes no other warrants, expressed or implied, including any implied conditions or warranties of merchantability or fitness for any particular purpose. QA-Bio, LLC shall not be liable for any incidental, consequential or contingent damages.

This product is intended for *in vitro* research only.

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