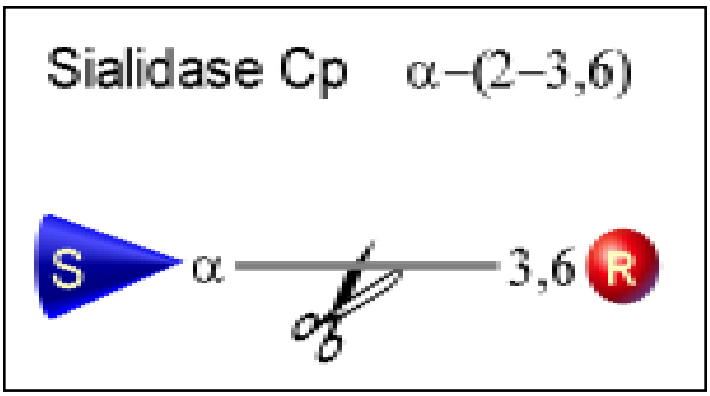
Sialadase Cp

Alpha-(2-3,6) Nueraminidase, NANase



Source
recombinant from *Clostridium perfringens*

Catalog Number
E-S005

Certification of Analysis Lot Number
312.1C

EC
3.2.1.18

Applications
•Structural analysis of oligosaccharides
•Determining sialic acid linkage
•Glycoprotein deglycosylation
•Removing heterogeneity from glycoproteins

Contents
1 vial: Sialidase Cp - 60 µl (900 mU)
in 20 mM Tris-HCl, 25 mM NaCl, pH 7.5
1 vial: Reaction buffer – 400 µl
250mM Sodium phosphate, pH 6.0

Specific Activity 250 U/mg
Activity 15 U/ml

Molecular Weight ~41,000 daltons
pH optimum 6.0, active over the range 4.5-7.

50 *m*M sodium phosphate (pH 6.0) provides the optimal buffer for enzyme activity with sialyllactose, a standard substrate. If glycosidase treatment is performed at suboptimal pH because of glycoprotein solubility or activity requirements, expect some diminution in enzyme activity.

Specific Activity
One unit of QA-Bio Sialidase is defined as the amount of enzyme required to produce 1 µmole of methylumbelliferone in 1 minute at 37°C, pH 5.0 from MU-NANA (2'.-(4-methyl-umbelliferyl)-*alpha*-D-N acetylneuraminic acid].

Specificity
All non-reducing terminal branched and unbranched α-(2-3) and α-(2-6) sialic acid.

Relative activity α-(2-3) > α-(2-6)

Formulation
The enzyme is provided as a sterile-filtered solution in 20 m*M* Tris-HCl, 25 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 Sialidase Cp 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-S005 Sialidase Cp
Specifications - Protocol

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Directions for use

1. Add up to 100 µg of 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 6.0.

4. Add 2 µl Sialidase Cp.

5. Incubate at 37°C for 1 hour.

NOTE: longer incubation times are necessary if branched sialic acids are present.

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

References:

Corfield, A. P., H. Higa, J. C. Paulson and R. Schauer. The specificity of viral and bacterial sialidases for alpha(2-3) and alpha(2-6)-linked sialic acids in glycoproteins. Biochim Biophys Acta 744:121-126 (1983).

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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).

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Roggentin P., R. G . Kleineidam and R. Schauer. Diversity in the properties of two sialidase isoenzymes produced by Clostridium perfringens spp . Biol Chem Hoppe-Seyler 376: 569-575 (1995).

Warranties and liabilities

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

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

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