Sialidase Sp

Alpha-(2-3) Nueraminidase, NANase

Source
recombinant from *Streptococcus pneumoniae*

Catalog Number
E-S007

Certification of Analysis Lot Number
401.1G

EC
3.2.1.18

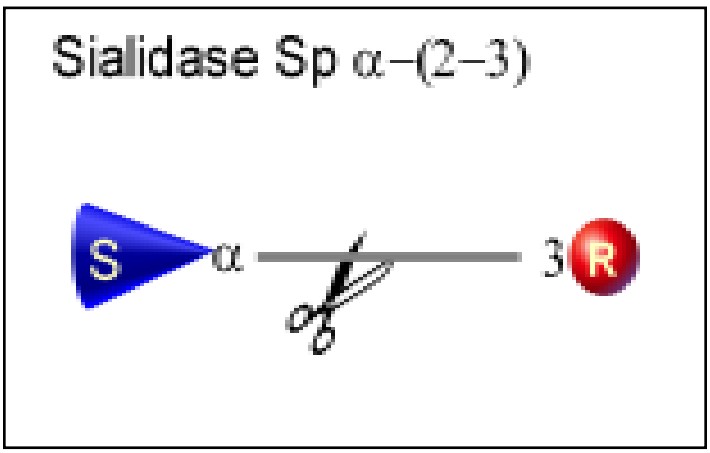
Applications
•Structural analysis of oligosaccharides
•Determining sialic acid linkage
•Glycoprotein deglycosylation
•Removing heterogeneity from glycoproteins

Contents
1 vial: Sialidase Sp - 60 µl (300 mU)
in 250 mM Sodium phosphate pH 7.5
1 vial: Reaction buffer – 400 µl
250mM Sodium phosphate, pH 6.0

Specific Activity >75 U/mg
Activity >2.5 U/ml

Molecular Weight ~75,000 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 Sp 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) sialic acid.

Formulation
The enzyme is provided as a sterile-filtered solution in in 250 mM Sodium phosphate 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 Sp 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-S007 Sialadase Sp
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 Sp.

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).

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).

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).

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).

Kelly, R.T., D. Greiff and S. Farmer. Neuraminidase activity in Diplococcus pneumoniae. J Bacteriol 91:601-3 (1965).

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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