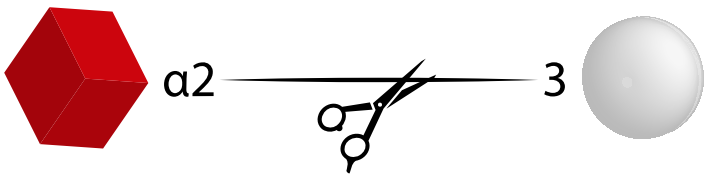

Neuraminidase Sp

Sialidase, NANase, N-acetylneuraminate glycohydrolase

α(2-3) Neuraminidase (N-acetylneuraminate glycohydrolase EC 3.2.1.18) cleaves exclusively the non-reducing terminal α(2-3) unbranched sialic acid residues from complex carbohydrates and glycoproteins. There is no detectable activity on α(2-6) or α(2-8) linkages or on branched α(2- 3) linkages (see Figure 1). To cleave all non- reducing terminal sialic acid residues including branched sialic acids (linked to an internal residue) from complex carbohydrates and glycoproteins, use α(2-3,6,8,9) Neuraminidase (E-S001).

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

Catalog Number

E-S007	60 µl
E-S007-20	20 µl
E-S007-200	200 µl

EC 3.2.1.18

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

Recommended Reagents
included with 20 µL and 60 µL pack sizes:
1 vial: Reaction buffer – 400 µl
250mM Sodium phosphate, pH 6.0

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

Activity ≥ 5 U/ml
Specific Activity ≥ 150 U/mg

Specific Activity Assay
One unit of QA-Bio Neuraminidase 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].

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.

Formulation
The enzyme is provided as a sterile-filtered solution in in 50 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.

Neuraminidase Sp
Specifications - Protocol

QA-Bio
www.QA-Bio.com
info@QA-Bio.com

phone/fax 866-384-2272
phone 760-249-2664

Storage
Store enzyme at 4°C. Do not freeze.

Purity
QA-Bio Neuraminidase 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.

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 Neuraminidase 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:
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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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