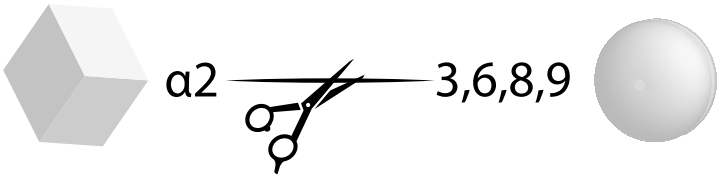

Neuraminidase Au Alpha-(2-3,6,8,9)

Sialidase, NANase, N-acetylneuraminate glycohydrolase

α (2-3,6,8,9) Neuraminidase cleaves all non-reducing terminal sialic acid residues from complex carbohydrates and glycoproteins. The relative cleavage rates for different linkages are:
α(2-6) > α(2-3) > α(2-8), α(2-9).

In addition, the enzyme will cleave branched sialic acids (linked to an internal residue). This property makes it unique among neuraminidases. High concentrations of enzymes and prolonged incubation times may be required for cleaving branched residues. To cleave only non- reducing terminal α(2-3) unbranched sialic acid residues, use α (2-3) Neuraminidase (E-S007).

α (2-3,6,8,9) Neuraminidase is isolated from a clone of Arthrobacter ureafaciens. The enzyme has been extensively characterized using oligosaccharide standards.

Source
recombinant from *Arthrobacter ureafaciens* in *E. Coli*

Catalog Number

E-S001	60 µl
E-S001-20	20 µl
E-S001-200	200 µl

Recommended Reagents
included with 20 µL and 60 µL pack size:
1 vial: 5x Reaction buffer
250mM Sodium phosphate, pH 6.0

Specificity
All non-reducing terminal branched and unbranched sialic acid.

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

Formulation
The enzyme is provided as a sterile-filtered solution in 20 m*M* Tris-HCl, 25 m*M* NaCl (pH 7.5).

Molecular Weight ~69,000 daltons

EC 3.2.1.18

Activity ≥ 5 U/m
Specific Activity ≥ 135 U/mgl

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

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.

Neuraminidase Au

Specifications - Protocol

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Stability
Stable at least 24 months when stored properly. Several days exposure to ambient temperatures will not reduce activity.

Purity
QA-Bio Neuraminidase Au is tested for contaminating protease as follows: 10 µg of denatured BSA is incubated at 37ºC 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 Au.

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.

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Warranties and liabilities
QA-Bio Inc 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.

revised on January 16, 2025

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