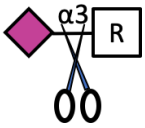
α2,3 Sialidase contents

Catalog #	Description	Size	M. W.	Purity	pH	Storage
GE0301	α2,3 Sialidase	5,000 units, lyophilized	76,965	> 95%	7.0-7.5, optimal	-20°C until use
GE0301L	α2,3 Sialidase, Large	50,000 units, lyophilized	76,965	> 95%	7.0-7.5, Optimal	-20°C until use
BA0701	10X Reaction Buffer	1 mL			7.5	4 to 25°C

This product is for research use only and not for resale or for any use in the manufacture of a therapeutic or for any diagnostic purpose.

Product Description: This product is a recombinant neuraminidase (exo-α-sialidase) cloned from *Streptococcus pneumoniae* and expressed in *Escherichia coli*. It preferentially releases terminal α2,3-linked *N*-acetylneuraminic acid (Neu5Ac) from oligosaccharides, glycoproteins or complex carbohydrates.



This product does not contain any detectable activities of proteases or other glycosidases.

Unit Definition: One unit is defined as the amount of α2,3 Sialidase required to catalyze the release of 1 nmole of *p*-nitrophenol (*p*NP) from 2-O-(*p*-Nitrophenyl)-α-D-N-acetylneuraminic acid (*p*NP-Neu5Ac) per 10 min at 37°C in a 100 µL, pH 7.5, buffer.

Product reconstitution: Dissolve the lyophilized product in 100 µL of ultrapure water to make a 50,000 units/ml (Cat #GE0301) or a 500,000 units/mL (Cat #GE0301L) solution in 1X Reaction Buffer (50 mM EPPS, 100 mM NaCl, pH 7.5). Once reconstituted, store at 4°C for up to 5 days or -80°C for up to 3 months. Avoid repeated freeze-thaw cycles.

Suggested protocol for protein desialylation:

1. Mix the following components in a microfuge tube:

Sialoglycoconjugate (e.g., fetuin, user supplied)	1 nanomole (2-100 µg)
10X Reaction Buffer (Cat #BA0701)	10 µL
α2,3 Sialidase (Cat #GE0301 or GE0301L)	1.0 µL (50 or 500 units)
Ultrapure water	to 100 µL final volume

2. Incubate at 37°C for 1 hour.
3. Analyze by Western blot or other method to determine the extent of desialylation on the substrate. Suggested 1° probes for Western blot analysis: biotinylated SiaFind™ α2,3-Specific Lectenz® (Cat #SK2301B) and SiaFind™ Pan-Specific Lectenz® (Cat #SK0501B).

Note: *Reactions may be scaled-up to accommodate larger amount and volume of substrate. Amount of enzyme and reaction time may vary for different substrates. Titration of the amount of enzyme in a reaction is recommended for each new substrate.*