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ProductInformation

a-(2® 3)-Neuraminidase, Positionally specific, from *Streptococcus pneumoniae*

Product Number **N 7271**
Storage Temperature 2–8 °C

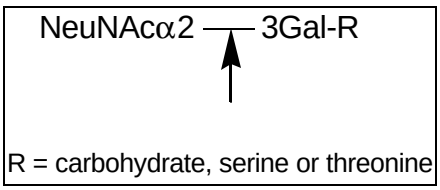
CAS# 9001-67-6
EC 3.2.1.18
Synonyms: Sialidase; N-Acetylneuraminidase; N-Acetylneuraminate glycohydrolase

Product Description
Two major classes of oligosaccharides (glycans) may be attached to glycoproteins. N-Linked glycans are attached to the amide side chain of some asparagine (Asn) residues, which form part of the consensus sequence AsnXaaSer/Thr, while O-linked glycans may be added to the hydroxyl side-chain of serine or threonine residues. The terminal residues on these glycan chains are commonly N-acylneuraminic acids (sialic acids). Neuraminidase can be used directly on intact glycoproteins or purified glycans as a gentle means of removing sialic acid.

Recombinant α-(2→3)-Neuraminidase from *Streptoccocus pneumoniae* is a highly purified enzyme, which hydrolyzes non-reducing terminal α-2→3 linked sialic acids from complex glycans and glycoproteins.[1,2] Due to the high selectivity of this enzyme, it is an extremely useful reagent for detailed structural analysis of glycans when used in conjunction with other broader specificity neuraminidase enzymes.[3,4,5]

Molecular weight: ~75 kDa

pH Range: 4.5 – 7.0 (pH optimum: 6.0)



Components
α-(2→3)-Neuraminidase (Product No. N 7271) - The enzyme is supplied in 50 mM sodium phosphate, pH 7.5

Unit Definition: One unit will hydrolyze 1 µmole of 4-methylumbelliferyl α-D-N-acetylneuraminide per minute at pH 5.0 at 37 °C.

α-(2→3)-Neuraminidase is tested and confirmed negative for the following contaminating activities:
α-galactosidase and β-galactosidase
N-acetylglucosaminidase
α-mannosidase and β- mannosidase
α-fucosidase
Protease activity was also not detected.

5X Reaction Buffer (Product No. R 0266) – 250 mM sodium phosphate, pH 6.0

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
It is recommended to store the product at 2–8 °C. Do Not Freeze.

Procedure
1. Dispense 1 nmole of glycan or 100 µg of glycoprotein into a microcentrifuge tube.
2. Adjust the final volume to 14 µl with deionized water.
3. Add 4 µl of 5X Reaction Buffer.
4. Then add 2 µl of α-(2→3)-neuraminidase.
5. Cap the tube and incubate at 37 °C for 1 hour.

To hydrolyze larger amounts of substrate, increase the reaction volume and volume of enzyme proportionally.

References

1. Corfield, A.P., *et al*., Biochem. Biophys. Acta, **744**, 121 (1983).
2. Glasgow, L.R., *et al*., J. Biol. Chem., **252**, 8612 (1977).
3. Dwek, R.A., *et al*., Ann. Rev. Biochem., **62**, 65 (1993).
4. Kobata, A., Anal. Biochem., **100,** 1 (1979).
5. Prime, S., *et al*., J. Chromatogr. A, **720**, 263 (1966).

AE,MAM 03/05-1