

Active Native Clostridium perfringens Neuraminidase, Type VI

Cat. No. Neuraminidase-006C Lot. No. (See product label)

SPECIFICATION

Product Overview	Type VI, Protein, ≥50% biuret
Species	Clostridium perfringens (C. welchii)
Description	Neuraminidase enzymes are hydrolase enzymes that promote influenza virus release from infected cells and facilitate virus spread.
Form	Lyophilized powder
CAS Number	9001-67-6
Enzyme Commission number	3.2.1.18 (BRENDA, IUBMB)
EC Number	232-624-6
MDL number	MFCD00131711
UNSPSC Code	12352204
NACRES	NA.54
Biochem/physiol Actions	Neuraminidase cleavage of sialic acid groups has been used to study recognition by antibodies of glycoprotein structures. The use of neuraminidase in the estimation of N-acetylneuraminic acid was compared favorably to two other methods.

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Neuraminidase from *Clostridium perfringens* reduces the viability of human leukemic myeloblasts and attenuates their ability to activate lymphocytes.

Neuraminidases are used to cleave terminal N-acetyl neuraminic acid (sialic acid) from a variety of glycoproteins. The enzyme from *Clostridium perfringens* cleaves terminal sialic acid residues which are α -2,3- α -2,6- or α -2,8-linked to Gal, GlcNac, GalNAc, AcNeu, GlcNeu, oligosaccharides, glycolipids or glycoproteins. The relative rate of cleavage decreases in the order: α -2-3 > α -2-6. α -2-8. Neuraminidase from *C. perfringens* cleaves α -2-3 linked sialic acid residues most efficiently, compared to *A. ureafaciens*, which preferentially cleaves α -2-6 linked residues.

The use of neuraminidase to remove sialic acid residues from glycoproteins on cell surfaces has been frequently reported. Generally, procedures have indicated using neuraminidase in PBS at 37 centigrade for 30 minutes, followed by several washings with PBS. Treatment of tissue sections with neuraminidase at much lower concentrations require longer incubation: for 1-4 U/mL in 0.1 M acetate buffer pH 4.2-5, from 2 to 20 hours at 37 centigrade.

Bio-activity

2-10 units/mg protein (mucin)
6-15 units/mg protein (using 4MU-NANA)

Applications

Neuraminidase from *Clostridium perfringens* (*C. welchii*) has been used in a study to assess a glycoprotein fraction suitable for use as a substrate in preparation assays. It has also been used in a study to investigate the action of an epsilon-toxin on MDCK cells.

Storage

At -20 centigrade

Reference

1. Production of all follicle-stimulating hormone isohormones from a purified preparation by neuraminidase digestion. A Ulloa-Aguirre et al. Biology of reproduction, 30(2), 382-387 (1984-03-01)

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GENE INFORMATION

Official Symbol Neuraminidase

Synonyms Acyl-neuraminyl Hydrolase; Receptor-destroying enzyme; Sialidase; Neuraminidase; Neuraminidase Type VI

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