

Product Information

Neuraminidase from *Vibrio cholerae*

Type III, buffered aqueous solution, 0.2 µm filtered, 1-5 units/mg protein
(Lowry, using NAN-lactose)

N7885

Product Description

CAS Registry Number: 9001-67-6

Enzyme Commission (EC) Number: 3.2.1.18

Synonyms: Acyl-neuraminyl Hydrolase, Sialidase, Receptor-destroying enzyme

Neuraminidase is used to cleave N-acetylneuraminic acid (sialic acid) from a variety of glycoproteins. Sialic acids are a family of N- and O-substituted derivatives of neuramic acid. Some of the more common and diverse known functions of sialic acids include the binding of hormones, toxins, and viruses, the masking of surface antigens, the modification of the circulating half-lives of red blood cells and glycoproteins, and the maintenance of surface negative charge.¹

The reaction specificity of neuraminidase varies with biological source. Neuraminidase from *Vibrio cholerae* requires Ca²⁺ ions for activity and is inhibited by the presence of EDTA. It preferentially hydrolyzes α(2→3)-linkages of sialic acid, but will also cleave α(2→6) and α(2→8)-linkages. The preference for α(2→3)-linkages is estimated at 260-fold.⁴

The X-ray crystal structure of neuraminidase from *Vibrio cholerae* at 2.3 Å resolution verified that the 83 kDa enzyme folds into three distinct domains. The central catalytic domain has the canonical neuraminidase beta-propeller fold and is flanked by two domains which possess identical lectin-like topologies.⁵

Several dissertations have cited use of product N7885 in their research.⁶⁻¹⁶

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Product

This product is chromatographically purified and is supplied as a 0.2 µm-filtered aqueous solution, pH 5.5, containing 0.15 M sodium chloride and 4 mM calcium chloride. It contains no preservatives.

Specific activity: 1–5 units/mg protein

Unit definition: One unit will liberate 1.0 µmole of N-acetylneuraminic acid per minute at pH 5.0 at 37 °C using NAN-lactose as the substrate.

Preparation Instructions

Reconstitute the contents of the vial with 100 µL of water to give a solution that contains ~25 mM potassium phosphate (pH 6.5), 150 mM NaCl, and a stabilizer.

Storage/Stability

Store the product at 2-8 °C. **Do not freeze.**

The product, as supplied, remains active for at least 2 years.

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