

## Product description

### for GlycoCleave® Neuraminidase EnzymeBeads\*

#### Product description:

Neuraminidase (Acylneuraminic hydrolase, 3.2.1.18 from *Vibrio cholerae*) is used specifically in various kinds of investigations, e.g. in studies of structure of glycoproteins, in cytological problems or as receptor-destroying enzyme in virology.

Neuraminidase from *Vibrio cholerae* hydrolyses O-ketoside  $\alpha$ 2-3,  $\alpha$ 2-6 and  $\alpha$ 2-8 bonds of terminal N-acetylneuraminic acids in various oligosaccharides, polysaccharides, mucopolysaccharides, glycoproteins and glycolipids. It is reported that the preference for  $\alpha$ 2-3-linkages is estimated at 260 fold. 1 U (unit) liberates 1  $\mu$ mol N-acetylneuraminic acid from human acid  $\alpha$ <sub>1</sub>-glycoprotein incubated for 1 min at +37 °C and pH 5.5 in sodium acetate buffer (0.05 mol/L) containing 1 mmol/L calcium chloride.

The neuraminidase adsorbent is a suspension of settled adsorbent supplied as a 50 % slurry containing 0.05 % sodium azide.

#### Enzyme-Ligand:

Neuraminidase is an enzyme isolated from the culture filtrate of *Vibrio cholerae* and affinity purified.

*Vibrio cholerae* neuraminidase has a large size of about 83 kDa and has been most widely used in biochemical research. Ca<sup>2+</sup> ions are essential for neuraminidase activity. Ca<sup>2+</sup> is on the surface of the main catalytic domain, holds together three loops, thereby stabilizing the positions of important residues in the active site. Enzyme activity is stimulated by Ca<sup>2+</sup> ions, and is inhibited by EDTA.

The enzymatic activity of GlycoCleave® Neuraminidase EnzymeBeads is verified by the desialylation of bovine fetuin in comparison to asialofetuin (acid hydrolysis) carried out at 37 °C for 16 hours.

For further details please look at the following article:

Crystal structure of *Vibrio cholerae* neuraminidase reveals dual lectin-like domains in addition to the catalytic domain; Susan Crennell, Elspeth Garman, Graeme Laver, Eric Vimr, Garry Taylor; *Structure* 1994, **2**: 535-544 (PDB-File: 1 KIT).

#### Adsorbent Specifications:

Pore diameter: 1000 Å

Particles: 75  $\mu$ m mean diameter

Cat.No.	Product description	Enzyme	Covalently immobilized enzyme [U/ mL adsorbent]	Size
132011	GlycoCleave® Neuraminidase EnzymeBeads	Neuraminidase	1	1 mL
132012	GlycoCleave® Neuraminidase EnzymeBeads	Neuraminidase	1	2 mL

#### Storage:

- Enzyme adsorbents should be stored equilibrated in sodium acetate buffer solution (50 mmol/L) at pH 5.5, with addition of sodium chloride (154 mmol/L) and calcium chloride (9 mmol/L) at 4 °C.

\* for research, laboratory and in vitro use only; not for drug or diagnostic use, food or food additives, household or other uses.

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