exo-α-SIALIDASE from *Clostridium perfringens* (Lot 120601a)

Recombinant

E-SIALCP **04/13**

(EC 3.2.1.18) exo-α-sialidase; acetylneuraminyl hydrolase

CAZy: GH Family 33

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 43,600)
- Single major band on isoelectric focusing (pI ~ 6.0)

2. SPECIFIC ACTIVITY:

647 U/mg protein (on *p*NP-α-D-N-acetylneuraminic acid) at pH 7.0 and 37°C.

***One Unit** of sialidase activity is defined as the amount of enzyme required to release one µmole of *p*-nitrophenol per minute from *p*NP-α-D-*N*-acetylneuraminic acid (1 mM) in sodium phosphate buffer (100 mM) pH 7.0 and 37°C, monitored at 410 nm.

** Extinction coefficient (ε) of p-nitrophenol = 5751 M^{-1} x cm^{-1}*

3. SPECIFICITY:

Hydrolysis of unbranched, non-reducing terminal α-2,3-linked, α-2,6-linked >> α-2,8-linked *N*-acetylneuraminic acid (NANA; Neu5Ac) residues from glycoproteins and oligosaccharides of glycoconjugates.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima: 4.5 - 8.0**

5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. **Swirl to mix the enzyme immediately prior to use.**

6. DESIALYLATION ASSAY (Suggested):

Glycoprotein or glycan	~ 100 µg
distilled water (at ~ 25°C)	14 µL
sodium phosphate (250 mM; pH 6.0)	4 µL
Sialidase	2 µL
Mix and incubate for 1hr at ~ 37°C	

7. REFERENCES:

Susanne Kruse, Reinhard G. Kleineidam, Peter Roggentin, & Roland Schauer (1996). Expression and Purification of a Recombinant "Small" Sialidase from *Clostridium perfringens* A99. *Prot. Expr. & Purif.* 7, 415–422.

*** Literature values*