exo-α-SIALIDASE from *Salmonella typhimurium* (Lot 120501c)

Recombinant

E-SIALST **03/19**

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

CAZy Family: GH33

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 42,900)
- Single major band on isoelectric focusing (pI ~ 8.5)

2. SPECIFIC ACTIVITY:

802 U/mg protein (on pNP-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: 5.5 - 7.0**

5. STORAGE CONDITIONS:

The enzyme is supplied in 20 mM Tris.HCl pH 7.5, 50 mM NaCl, 5 mM EDTA plus 0.02% (w/v) sodium azide and should be stored at 4°C.

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 1 hr at ~ 37°C	

7. REFERENCES:

Lois L. Hoyer, Peter Roggentin, Roland Schauer & Eric R. Vimr (1991). Purification and Properties of Cloned *Salmonella typhimurium* LT2 Sialidase with Virus-Typical Kinetic Preference for Sialyl α2,3 Linkages. *J. Biochem.* 110, 462-467.

*** Literature values*