



SialEXO®

Lyophilized

STORE AT

-20°C



FOR RESEARCH USE ONLY

Instructions for Use

SialEXO® Lyophilized 2000 units (G1-SM1-020)
Process 2 mg glycoprotein



Lyophilized Enzyme Mix for Hydrolysis of Sialic Acids

The SialEXO products are sialidases for efficient desialylation of N- and O-glycosylated proteins. SialEXO Lyophilized consists of two sialidases, each having a unique activity, and they work simultaneously. One enzyme has a broad activity for α 2-3, α 2-6 and α 2-8-linked sialic acids, and the other one quickly hydrolyzes sialic acids with α 2-3-linkages. SialEXO Lyophilized removes all sialic acids on native proteins within two hours.

SialEXO hydrolyzes glycoproteins under native conditions and displays activity at pH 6.5-9.0.

The enzymes in SialEXO Lyophilized are derived from *Akkermansia muciniphila* and expressed in *E. coli*. Both enzymes contain a His-tag and the molecular weights of the enzymes are 43 kDa and 66 kDa.

UNIT DEFINITION

One unit SialEXO Lyophilized hydrolyzes sialic acids from $\geq 90\%$ of 1 μ g glycoprotein (fetuin) when incubated in 20 mM Tris pH 6.8 at 37°C for 2 hours.

CONTENT AND STORAGE

SialEXO Lyophilized is supplied lyophilized in TBS, pH 7.6, with no preservatives added.

SialEXO Lyophilized is shipped at ambient temperature, and should be stored at -20°C upon arrival.

After reconstitution, SialEXO Lyophilized is stable for at least 1 month at +4-8°C.

SialEXO is for R&D use only.

QUALITY CONTROL

SialEXO Lyophilized is tested to meet the specifications and lot-to-lot consistency.

SialEXO Lyophilized is tested for absence of microbial contamination with blood agar plates, Sabouraud dextrose agar plates and fluid thioglycollate medium.

YOU MIGHT ALSO BE INTERESTED IN

SialEXO® Immobilized

Immobilized enzymes for hydrolysis of sialic acids in spin columns

OpeRATOR®

O-glycan-specific protein digestion

GalactEXO™

Hydrolysis of β 1-3,4 galactose

GaINAcEXO™

Hydrolysis of α -linked GalNAcs

FucosEXO™

Hydrolysis of α 1-2,3,4 fucose

OmniGLYZOR™

Hydrolysis of N- and mucin-type O-glycans

Preparations

Additional Materials Required

- Reaction buffer: 20mM Tris, pH 6.8.¹

1. SialEXO displays high activity in buffers at pH 6.5-9.0.

Hydrolysis of Sialic Acids

Sample Preparation

Prepare the glycoprotein in the reaction buffer. The final protein concentration in the digestion reaction should be 0.1-5 mg/ml.

1. Prepare SialEXO

1.1 Reconstitute SialEXO in 50 μ l ddH₂O to a concentration of 40 units/ μ l.

2. Add SialEXO

2.1 Add 1 unit SialEXO / 1 μ g glycoprotein or to 1 pmol oligosaccharides.²

3. Enzymatic Reaction

3.1 Incubate for 30 min-2 h at 37°C.³

2. A higher enzyme concentration may increase digestion efficiency of individual glycoproteins or oligosaccharides. This requires optimization.
3. Longer incubation times may be required depending on the glycoprotein.

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