

# FucosEXO™

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FOR RESEARCH  
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STORE AT  
-20°C



SmartEnzymes™

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## INSTRUCTIONS FOR PRODUCT

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**FucosEXO™ 2000 units** (G1-FM1-020)

Digestion of up to 2 mg glycoprotein

## 1 Prepare FucosEXO™

- Reconstitute FucosEXO in 50 µl ddH<sub>2</sub>O to a concentration of 40 units/µl



## 2 Add FucosEXO™

- Add 1 unit FucosEXO / 1 µg glycoprotein



## 3 Digestion

- Incubate for 1 to 2 h at 37°C



# PRODUCT DESCRIPTION

FucosEXO is a mix of  $\alpha$ -fucosidases for efficient removal of  $\alpha$ 1-2,  $\alpha$ 1-3 and  $\alpha$ 1-4-linked fucose residues on *N*- and *O*-glycosylated proteins or oligosaccharides. FucosEXO hydrolyzes glycoproteins under native conditions and displays a high activity in a pH range from 6 to 8. The enzymes in FucosEXO are expressed in *E. coli*. FucosEXO is composed of two fucosidases modified with His-tags and with the molecular weights of 87 kDa and 64 kDa.

## Unit Definition

One unit of FucosEXO hydrolyzes fucoses from  $\geq 90\%$  of 11 nmol 2'-fucosyllactose and 4.5 nmol 3-fucosyllactose when incubated in 20 mM Tris pH 6.8 at 37°C for 30 min.

## **Content and Storage**

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

FucosEXO is shipped cold and should be stored at  $-20^{\circ}\text{C}$  upon arrival.

After reconstitution FucosEXO is stable for at least 1 month at  $+4-8^{\circ}\text{C}$ .

FucosEXO is for R&D use only.

# DETAILED PROTOCOL

## Additional Materials Required

- Reaction buffer<sup>1</sup>: 20mM Tris pH 6.8

## Sample Preparation

- Prepare the glycoprotein of interest in the reaction buffer at a concentration of 0.5-5.0mg/ml.

### 1 Prepare FucosEXO™

- Reconstitute FucosEXO in 50µl ddH<sub>2</sub>O to a concentration of 40 units/µl.

### 2 Add FucosEXO™

- Add 1 unit FucosEXO / 1 µg glycoprotein<sup>2</sup>.

### 3 Digestion

- Incubate for 1 h to 2 h at 37°C

Optimization of enzyme concentrations and incubation time may be needed depending on the substrate.

#### Notes

1. FucosEXO displays high activity in buffers with pH values from 6 to 8 and over a wide range of ionic strength (0-500 mM NaCl). Some optimizations might be required if a buffer other than the recommended reaction buffer is used.
2. A higher enzyme concentration may increase digestion efficiency of individual glycoproteins. This requires optimization.

## Quality Control

FucosEXO is tested to meet the specifications and lot-to-lot consistency.

FucosEXO is tested for the absence of microbial contamination using blood agar plates, Sabouraud dextrose agar plates and fluid thioglycollate medium.

## Related Products

### SialEXO®

For complete removal of  $\alpha$ 2-3,  $\alpha$ 2-6 and  $\alpha$ 2-8 linked sialic acids.

### GalactEXO™

For complete removal of  $\beta$ 1-3 and  $\beta$ 1-4 linked galactoses.

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