



## CERTIFICATE OF ANALYSIS

PRODUCT NAME: GLYKO®  $\alpha$  (1-2,3,4,6) FUCOSIDASE (Bovine Kidney)

PRODUCT CODE: GKX-5006

LOT NUMBER: DG43 018a

FORMULATION: Lyophilized from 20 mM sodium citrate phosphate buffer, 250  $\mu$ g/ml BSA (pH 6.0)

STORAGE: -20°C until reconstituted.  
Store redissolved enzyme at 4°C or -20°C, avoid repeated freeze-thaw cycles.

The activity of the reconstituted enzyme is stable at 4°C for at least 3 months and at least 6 months when stored at -20°C.

PACK SIZE: 500 milliUnits

RECONSTITUTION: Dissolve the lyophilizate in 240  $\mu$ l of ultrapure water to obtain the described formulation.

EXPIRATION: February 2018 (extended from prior exp. date based on re-assay)

RE-ASSAY DATE: February 2017

SPECIFICITY: The enzyme has broad substrate specificity, cleaving  $\alpha$ (1-2,3,4 and 6)-linked fucose from N- and O-glycans. It cleaves  $\alpha$ (1-6)-linked fucose on the trimannosyl core of N-linked oligosaccharides more efficiently than other  $\alpha$ -fucose linkages. The fine specificity of the enzyme is complicated since the aglycon portion of the substrate significantly influences the substrate kinetics. The rate of cleavage is lower with increasing oligosaccharide size and complexity.

SUGGESTIONS FOR USE: For digestion of isolated glycans, incubate 16-24 hours at 37°C in 1x Reaction Buffer with 0.5-1 U/ml of enzyme at a substrate concentration of 20-40  $\mu$ M.

## QUALITY CONTROL

1.	Activity <sup>1</sup> :	Passed	(Specification: $\geq 500$ mU/vial)
2.	Protease assay <sup>2</sup> :	Passed	(Specification: "Not Detectable")
3.	Contaminants <sup>3</sup> :	Passed	(Specification: $\leq 0.005\%$ )

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Authorized Signature

1. One unit of  $\alpha$ -Fucosidase is defined as the amount of enzyme which will catalyze the release of 1  $\mu$ mole of p-nitrophenol from pNP- $\alpha$ -fucopyranoside per minute at pH 6.0 and 37°C.
2. No protease activity was detectable after incubation of the enzyme with 0.2 mg resorufin-labeled casein for ~18 hours at 37°C based on Schickaneder E, Hösel W, von der Eltz H, Geuß U. Casein-resorufin, a new substrate for a highly sensitive protease assay. Fresenius Z. Anal Chem. 1988 330:360.
3. The product was tested for exoglycosidase contaminants by extended incubations with the corresponding pNP-glycosides:  $\alpha$ -mannosidase,  $\beta$ -mannosidase,  $\alpha$ -galactosidase,  $\beta$ -galactosidase,  $\beta$ -N-acetylhexosaminidase,  $\alpha$ -N-acetylgalactosaminidase,  $\beta$ -fucosidase,  $\alpha$ -glucosidase,  $\beta$ -glucosidase and  $\beta$ -xylosidase. The product was tested for contaminating sialidase by extended incubation with MU-NANA.