

CERTIFICATE OF ANALYSIS

PRODUCT NAME: O-GLYCANASE™ (recombinant from *Streptococcus pneumoniae* expressed in *E. coli*)

PRODUCT CODE: GK80090

LOT NUMBER: 155 001a-1

ENZYME FORMULATION: 20 mM Tris-HCl, 25 mM NaCl (pH 7.5)

STORAGE: 2 - 8° C

ENZYME FILL SIZE: 50 mU (40 µl)

COMPONENTS

Product Code & Name	Quantity	Lot No.	Expiry
O-Glycanase (50 mU)	1 each	155 001a	Dec 2019
WS0059 5x Reaction Buffer (1 ml) [250 mM sodium phosphate (pH 5.0)]	1 each	W170175	Jun 2021

QUALITY CONTROL

1. Enzyme Activity¹: Passed (Specification: ≥1.25 U/ml)
2. Enzyme Specific Activity: 52.6 U/mg (Report Only)
3. Protease assay²: Passed (Specification: "Not Detectable")
4. Contaminants³: Passed (Specification: ≤0.005%)

Authorized Signature

1. One unit is defined as the amount of enzyme required to catalyze the release of 1 μ mole of p-nitrophenol from Gal β (1-3) GalNAc α -pNP per minute at pH 5.5 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 absence of exoglycosidase contaminants was confirmed by extended incubations with the corresponding pNP-glycosides: α -fucosidase, β -fucosidase, α -mannosidase, β -mannosidase, α -N-acetylgalactosaminidase, β -N-acetylhexosaminidase, α -galactosidase, β -galactosidase, α -glucosidase, β -glucosidase and β -xylosidase. The product was tested for contaminating sialidase by extended incubation with MU-NANA.