240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

## New England Biolabs Certificate of Analysis

Product Name: α1-2,3,6 Mannosidase

Catalog #: P0768S/L
Concentration: 2,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to cleave > 95% of the terminal mannose from 1 nmol of Man( $\alpha$ 1,3)

-Man( $\beta$ 1,4)-GlcNAc-7-amino-4-methyl-coumarin (AMC), in 1 hour at 37°C in a total reaction volume of 10  $\mu$ l.

 Lot #:
 0081801

 Assay Date:
 01/2018

 Expiration Date:
 1/2019

 Storage Temp:
 4°C

Storage Conditions: 50 mM NaCl, 20 mM Tris-HCl, (pH 7.5 @ 25°C)

Specification Version: PS-P0768S/L v1.0
Effective Date: 15 Dec 2017

Assay Name/Specification (minimum release criteria)	Lot #0081801
Glycosidase Activity (Endo F1, F2, H) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled Endo F1, F2, H substrate (Dansylated invertase high mannose) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (Endo F2, F3) - A 10 μl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled Endo F2, F3 substrate (Dansylated fibrinogen biantennary) and 4 units of α1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (PNGase F) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled PNGase F substrate (Fluoresceinated fetuin triantennary) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
<b>Glycosidase Activity (β-Mannosidase)</b> - A 10 μl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled β-Mannosidase substrate (Manβ1-4Manβ1-4Man-AMC) and 4 units of α1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
<b>Glycosidase Activity (β-Xylosidase)</b> - A 10 μl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled β-Xylosidase substrate (Xylβ1-4Xylβ1-4Xylβ1-4Xyl-AMC) and 4 units of α1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass









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Glycosidase Activity ( $\beta$ 1-3 Galactosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -Galactosidase substrate (Gal $\beta$ 1-3GlcNAc $\beta$ 1-4Gal $\beta$ 1-4Glc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\beta$ 1-4 Galactosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -Galactosidase substrate (Gal $\beta$ 1-4GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc -AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\beta$ -N-Acetylgalactosaminidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -N-Acetylgalactosaminidase substrate (GalNAc $\beta$ 1-4Gal $\beta$ 1-4Glc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\beta$ -N-Acetylglucosaminidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -N-Acetylglucosaminidase substrate (GlcNAc $\beta$ 1-4GlcNAc $\beta$ 1-4GlcNAc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha$ -Glucosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Glucosidase substrate (Glc $\alpha$ 1-6Glc $\alpha$ 1-4Glc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha$ -Neuraminidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Neuraminidase substrate (Neu5Ac $\alpha$ 2-3Gal $\beta$ 1-3GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha$ 1-2 Fucosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Fucosidase substrate (Fuc $\alpha$ 1-2Gal $\beta$ 1-4Glc-AMC) and 4 unit of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha 1$ -3 Fucosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Fucosidase substrate (Fuc $\alpha 1$ -3Gal $\beta 1$ -4GlcNAc $\beta 1$ -3Gal $\beta 1$ -4Glc-AMC) and 4 units of $\alpha 1$ -2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass









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Assay Name/Specification (minimum release criteria)	Lot #0081801
Glycosidase Activity ( $\alpha$ 1-3 Galactosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Galactosidase substrate (Gal $\alpha$ 1-3Gal $\beta$ 1-4GlcNAc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha 1$ -6 Galactosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Galactosidase substrate (Gal $\alpha 1$ -6Glc $\alpha 1$ -2Fru-AMC) and 4 units of $\alpha 1$ -2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha$ -N-Acetylgalactosaminidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -N-Acetylgalactosaminidase substrate (GalNAc $\alpha$ 1-3(Fuc $\alpha$ 1-2)Gal $\beta$ 1-4Glc-AMC) and 4 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Protease Activity (SDS-PAGE) - A 20 $\mu$ l reaction in 1X Glyco Buffer 4 containing 24 $\mu$ g of a standard mixture of proteins and a minimum of 10 units of $\alpha$ 1-2,3,6 Mannosidase incubated for 20 hours at 37°C, results in no detectable degradation of the protein mixture as determined by SDS-PAGE with Coomassie Blue detection.	Pass

Authorized by Derek Robinson 15 Dec 2017







Inspected by Alicia Bielik 26 Jan 2018