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## New England Biolabs Certificate of Analysis

Product Name: \$\beta 1-3,4 \text{ Galactosidase}\$

Catalog #: P0746S/L
Concentration: 8,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to cleave > 95% of the terminal,  $\beta$ -D-galactose from 1 nmol Gal $\beta$ 1-

 $4GlcNAc\beta$ 1-  $3Gal\beta$ 1-4Glc-7-amino-4-methyl-coumarin (AMC), in 1 hour at 37°C in a total reaction volume of 10  $\mu$ l.

 Lot #:
 0081703

 Assay Date:
 03/2017

 Expiration Date:
 3/2018

 Storage Temp:
 4°C

Storage Conditions: 50 mM NaCl, 20 mM Tris-HCl, 1 mM EDTA, (pH 7.5 @ 25°C)

Specification Version: PS-P0746S/L v1.0
Effective Date: 04 Nov 2016

Assay Name/Specification (minimum release criteria)	Lot #0081703
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 16 units of $\beta$ 1-3,4 Galactosidase 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 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled Endo F2, F3 substrate (Dansylated fibrinogen biantennary) and 16 units of $\beta$ 1-3,4 Galactosidase 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 16 units of $\beta$ 1-3,4 Galactosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (β-Mannosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled β-Mannosidase substrate (Manβ1-4Manβ1-4Man-AMC) and 16 units of β1-3,4 Galactosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (β-Xylosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled β-Xylosidase substrate (Xylβ1-4Xylβ1-4Xylβ1-4Xyl-AMC) and 16 units of β1-3,4 Galactosidase 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 ( $\beta$ -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 16 units of $\beta$ 1-3,4 Galactosidase 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 16 units of $\beta$ 1-3,4 Galactosidase 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 $\alpha$ 1-4Glc-4MC) and 16 units of $\beta$ 1-3,4 Galactosidase 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 16 units of $\beta$ 1-3,4 Galactosidase 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 16 units of $\beta$ 1-3,4 Galactosidase 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 16 units of $\beta 1$ -3,4 Galactosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
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 16 units of $\beta$ 1-3,4 Galactosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha 1$ -3 Mannosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Mannosidase substrate (Man $\alpha 1$ -3Man $\beta 1$ -4GlcNAc-AMC) and 16 units of $\beta 1$ -3,4 Galactosidase 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 ( $\alpha$ 1-6 Galactosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Galactosidase substrate (Gal $\alpha$ 1-6Gal $\alpha$ 1-6Glc $\alpha$ 1-2Fru-AMC) and 16 units of $\beta$ 1-3,4 Galactosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity ( $\alpha 1$ -6 Mannosidase) - A 10 $\mu$ l reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Mannosidase substrate (Man $\alpha 1$ -6(Man $\alpha 1$ -3)Man-AMC) and 16 units of $\beta 1$ -3,4 Galactosidase 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 16 units of $\beta$ 1-3,4 Galactosidase 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 40 units of $\beta$ 1-3,4 Galactosidase 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 04 Nov 2016







Inspected by Alicia Bielik 08 Mar 2017