

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:	β1-3,4 Galactosidase
Catalog Number:	P0746S
Concentration:	8,000 U/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 Number:	10021653
Expiration Date:	06/2019
Storage Temperature:	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

β1-3,4 Galactosidase Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
P0746SVIAL	β1-3,4 Galactosidase	10009610	Pass	
B1703SVIAL	10X Glycobuffer 4	0021710	Pass	

Assay Name/Specification	Lot # 10021653
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
<b>Glycosidase Activity (Endo F1, F2, H)</b> 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
<b>Glycosidase Activity (Endo F2, F3)</b> 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





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

Assay Name/Specification	Lot # 10021653
<b>Glycosidase Activity (PNGase F)</b> A 10 $\mu$ I 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
<b>Glycosidase Activity (<math>\alpha</math>-Glucosidase)</b> A 10 µl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\alpha$ -Glucosidase substrate (Glc $\alpha$ 1-6Glc $\alpha$ 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
<b>Glycosidase Activity (<math>\alpha</math>-Neuraminidase)</b> A 10 $\mu$ I 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
<b>Glycosidase Activity (<math>\alpha</math>1-2 Fucosidase)</b> A 10 µl 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
<b>Glycosidase Activity (α1-3 Fucosidase)</b> A 10 µl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled α-Fucosidase substrate (Fucα1-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc-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
<b>Glycosidase Activity (<math>\alpha</math>1-3 Galactosidase)</b> A 10 µl 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
<b>Glycosidase Activity (<math>\alpha</math>1-3 Mannosidase)</b> A 10 µl 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
Glycosidase Activity (α1-6 Galactosidase)	Pass





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

Assay Name/Specification	Lot # 10021653
A 10 $\mu$ I 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.	
<b>Glycosidase Activity (<math>\alpha</math>1-6 Mannosidase)</b> A 10 µl 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
<b>Glycosidase Activity (<math>\alpha</math>-N-Acetylgalactosaminidase)</b> A 10 µl 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
<b>Glycosidase Activity (<math>\beta</math>-Mannosidase)</b> A 10 $\mu$ I reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -Mannosidase substrate (Man $\beta$ 1-4Man $\beta$ 1-4Man-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
<b>Glycosidase Activity (<math>\beta</math>-Xylosidase)</b> A 10 µl reaction in Glyco Buffer 4 containing 1 nM of fluorescently-labeled $\beta$ -Xylosidase substrate (Xyl $\beta$ 1-4Xyl $\beta$ 1-4Xyl $\beta$ 1-4Xyl-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
<b>Glycosidase Activity (<math>\beta</math>-N-Acetylgalactosaminidase)</b> A 10 µl 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
<b>Glycosidase Activity (<math>\beta</math>-N-Acetylglucosaminidase)</b> A 10 µl 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

This product has been tested and shown to be in compliance with all specifications.





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

grd

Brad Landgraf Production Scientist 22 Jun 2018

Michae 11.

Michael Tonello Packaging Quality Control Inspector 09 Oct 2018

