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## New England Biolabs Certificate of Analysis

Product Name:  $\beta$ -N-Acetylglucosaminidase S

Catalog Number: P0744S
Concentration: 4,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to cleave > 95%

of the terminal, non-reducing β-N-Acetylglucosamine from 1 nmol

GlcNAcβ1-4GlcNAcβ1-4GlcNAc-7-amino-4-methylcoumarin (AMC), in 1 hour

at 37°C in a total reaction volume of 10 μl.

Packaging Lot Number: 10107179
Expiration Date: 02/2022
Storage Temperature: 4°C

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

Specification Version: PS-P0744S/L v1.0

β-N-Acetylglucosaminidase S Component List				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
P0744SVIAL	β-N-Acetylglucosaminidase S	10097254	Pass	
B1727SVIAL	10X GlycoBuffer 1	10092862	Pass	

Assay Name/Specification	Lot # 10107179
Protein Purity Assay (SDS-PAGE)	Pass
β-N-Acetylglucosaminidase S is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
Protease Activity (SDS-PAGE)	Pass
A 20 μl reaction in 1X Glyco Buffer 1 containing 24 μg of a standard mixture of proteins and a minimum of 24 units of β-N-Acetylglucosaminidase S 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.	
Glycosidase Activity (β-Mannosidase)	Pass
A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-Mannosidase substrate (Manβ1-4Manβ1-4Man-AMC) and 16 units of	
β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable	
activity as determined by thin layer chromatography.	
Glycosidase Activity (β1-4 Galactosidase)	Pass
A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled	



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Assay Name/Specification	Lot # 10107179
β-Galactosidase substrate (Gal $β$ 1-4GlcNAc $β$ 1-3Gal $β$ 1-4Glc -AMC) and 16 units of $β$ -N-Acetylglucosaminidase S incubated for 20 hours at 37 $°$ C results in no detectable activity as determined by thin layer chromatography.	
Glycosidase Activity (β-N-Acetylgalactosaminidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-N-Acetylgalactosaminidase substrate (GalNAc $\beta$ 1-4Gal $\beta$ 1-4Glc-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (α-Glucosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Glucosidase substrate (Glcα1-6Glcα1-4Glc-AMC) and 16 units of $\beta$ -N-Acetylglucosaminidase S 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 1 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 $\beta$ -N-Acetylglucosaminidase S 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 $\mu$ I reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled $\alpha$ -Mannosidase substrate (Man $\alpha$ 1-6(Man $\alpha$ 1-6)Man-AMC) and 16 units of $\beta$ -N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (β1-3 Galactosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-Galactosidase substrate (Galβ1-3GlcNAcβ1-4Galβ1-4Glc-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at $37^{\circ}$ C results in no detectable activity as determined by thin layer chromatography.	Pass
<b>Glycosidase Activity (α-Neuraminidase)</b> A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Neuraminidase substrate (Neu5Acα2-3Gal $\beta$ 1-3GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc-AMC) and 16 units of $\beta$ -N-Acetylglucosaminidase S 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 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-Xylosidase substrate (Xylβ1-4Xylβ1-4Xylβ1-4Xyl-AMC) and 16 units of	Pass



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Assay Name/Specification	Lot # 10107179
β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	
Glycosidase Activity (α1-3 Galactosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Galactosidase substrate (Galα1-3Galβ1-4GlcNAc-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (α1-3 Fucosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Fucosidase substrate (Fucα1-3Galβ1-4GlcNAcβ1-3Galβ1-4Glc-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (α1-6 Galactosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Galactosidase substrate (Galα1-6Galα1-6Glcα1-2Fru-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (α1-3 Mannosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Mannosidase substrate (Manα1-3Manβ1-4GlcNAc-AMC) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (α1-2 Fucosidase) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Fucosidase substrate (Fucα1-2Galβ1-4Glc-AMC) and 16 units of β-N-Acetylglucosaminidase S 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 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled PNGase F substrate (Fluoresceinated fetuin triantennary) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	Pass
Glycosidase Activity (Endo F1, F2, H) A 10 μl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled Endo F1, F2, H substrate (Dansylated invertase high mannose) and 16 units of β-N-Acetylglucosaminidase S incubated for 20 hours at 37°C results in no detectable	Pass



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

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Alicia Bielik Production Scientist

03 May 2021

Michael Tonello

Packaging Quality Control Inspector

03 May 2021



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