

## New England Biolabs Certificate of Analysis

**Product Name:**  $\alpha$ 1-2, 3, 4, 6 Fucosidase  
**Catalog Number:** P0748S  
**Concentration:** 8,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to cleave > 95% of the  $\alpha$ -L-fucose from 1 nmol of Fuc  $\alpha$ 1-2Gal $\alpha$ 1-4Glc-7-amino-4-methyl-coumarin (AMC), in 1 hour at 37°C in a total reaction volume of 10  $\mu$ l.  
**Packaging Lot Number:** 10055869  
**Expiration Date:** 10/2020  
**Storage Temperature:** 4°C  
**Storage Conditions:** 50 mM NaCl, 20 mM Tris-HCl, 1 mM EDTA, (pH 7.5 @ 25°C)  
**Specification Version:** PS-P0748S/L v2.0

<b><math>\alpha</math>1-2, 3, 4, 6 Fucosidase Component List</b>			
<b>NEB Part Number</b>	<b>Component Description</b>	<b>Lot Number</b>	<b>Individual QC Result</b>
P0748SVIAL	$\alpha$ 1-2, 3, 4, 6 Fucosidase	10055870	<b>Pass</b>
B9001SVIAL	Purified BSA	10014762	<b>Pass</b>
B1727SVIAL	10X GlycoBuffer 1	10041785	<b>Pass</b>

<b>Assay Name/Specification</b>	<b>Lot # 10055869</b>
<b>Glycosidase Activity (<math>\beta</math>-Xylosidase)</b> A 10 $\mu$ l reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled $\beta$ -Xylosidase substrate (Xyl $\beta$ 1-4Xyl $\beta$ 1-4Xyl $\beta$ 1-4Xyl-AMC) and 16 units of $\alpha$ 1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	<b>Pass</b>
<b>Glycosidase Activity (<math>\beta</math>1-3 Galactosidase)</b> A 10 $\mu$ l reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled $\beta$ -Galactosidase substrate (Gal $\beta$ 1-3GlcNAc $\beta$ 1-4Gal $\beta$ 1-4Glc-AMC) and 16 units of $\alpha$ 1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	<b>Pass</b>
<b>Glycosidase Activity (<math>\beta</math>1-4 Galactosidase)</b> A 10 $\mu$ l reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled $\beta$ -Galactosidase substrate (Gal $\beta$ 1-4GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc -AMC) and 16 units of $\alpha$ 1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	<b>Pass</b>

Assay Name/Specification	Lot # 10055869
<p><b>Protease Activity (SDS-PAGE)</b> A 20 µl reaction in 1X Glyco Buffer 1 containing 24 µg of a standard mixture of proteins and a minimum of 40 units of α1-2, 3, 4, 6 Fucosidase 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.</p>	<b>Pass</b>
<p><b>Protein Purity Assay (SDS-PAGE)</b> α1-2, 3, 4, 6 Fucosidase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α1-6 Galactosidase)</b> 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 α1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α1-6 Mannosidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Mannosidase substrate (Manα1-6Manα1-6(Manα1-3)Man-AMC) and 16 units of α1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (β-Mannosidase)</b> 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 α1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (β-N-Acetylgalactosaminidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-N-Acetylgalactosaminidase substrate (GalNAcβ1-4Galβ1-4Glc-AMC) and 16 units of α1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (β-N-Acetylglucosaminidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled β-N-Acetylglucosaminidase substrate (GlcNAcβ1-4GlcNAcβ1-4GlcNAc-AMC) and 16 units of α1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (Endo F1, F2, H)</b></p>	<b>Pass</b>

Assay Name/Specification	Lot # 10055869
<p>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 α-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	
<p><b>Glycosidase Activity (Endo F2, F3)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled Endo F2, F3 substrate (Dansylated fibrinogen biantennary) and 16 units of α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (PNGase F)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled PNGase F substrate (Fluoresceinated fetuin triantennary) and 16 units of α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α-Glucosidase)</b> 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 α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α-N-Acetylgalactosaminidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-N-Acetylgalactosaminidase substrate (GalNAcα1-3(Fuca1-2)Galβ1-4Glc-AMC) and 16 units of α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α-Neuraminidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled α-Neuraminidase substrate (Neu5Acα2-3Galβ1-3GlcNAcβ1-3Galβ1-4Glc-AMC) and 16 units of α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α1-3 Galactosidase)</b> 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 α-1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Glycosidase Activity (α1-3 Mannosidase)</b> A 10 µl reaction in Glyco Buffer 1 containing 1 nM of fluorescently-labeled</p>	<b>Pass</b>

Assay Name/Specification	Lot # 10055869
$\alpha$ -Mannosidase substrate (Man $\alpha$ 1-3Man $\beta$ 1-4GlcNAc-AMC) and 16 units of $\alpha$ 1-2, 3, 4, 6 Fucosidase incubated for 20 hours at 37°C results in no detectable activity as determined by thin layer chromatography.	

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



Tony Spear-Alfonso  
Production Scientist  
12 Sep 2018



Michael Tonello  
Packaging Quality Control Inspector  
28 Oct 2019