NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*Bacteroides Heparinase II*
Catalog Number:	*P0736L*
Concentration:	*4,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme that will liberate 1.0 µmol unsaturated oligosaccharides from porcine mucosal heparin per minute at 30°C and pH 7.0 in a total reaction volume of 100 µl.*
Packaging Lot Number:	*10078914*
Expiration Date:	*07/2021*
Storage Temperature:	*-80°C*
Storage Conditions:	*100 mM NaCl, 20 mM Tris-HCl, 1 mM EDTA, 5 mM CaCl2, (pH 7.5 @ 25°C)*
Specification Version:	*PS-P0736S/L v1.0*

Bacteroides Heparinase II Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
P0736LVIAL	Bacteroides Heparinase II	10078913	**Pass**
B0735SVIAL	Bacteroides Heparinase Reaction Buffer (10X)	10052584	**Pass**

Assay Name/Specification	**Lot # 10078914**
Glycosidase Activity (β1-3 Galactosidase) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled β-Galactosidase substrate (Galβ1-3GlcNAcβ1-4Galβ1-4Glc-AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30ºC results in no detectable activity as determined by thin layer chromatography.	**Pass**
Glycosidase Activity (β1-4 Galactosidase) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled β-Galactosidase substrate (Galβ1-4GlcNAcβ1-3Galβ1-4Glc -AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30ºC results in no detectable activity as determined by thin layer chromatography.	**Pass**
Glycosidase Activity (β-N-Acetylgalactosaminidase) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled β-N-Acetylgalactosaminidase substrate (GalNAcβ1-4Galβ1-4Glc-AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30ºC results in no detectable activity as determined by thin layer chromatography.	**Pass**

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Assay Name/Specification	Lot # 10078914
Glycosidase Activity (β-N-Acetylglucosaminidase) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled β-N-Acetylglucosaminidase substrate (GlcNAcβ1-4GlcNAcβ1-4GlcNAc-AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30ºC results in no detectable activity as determined by thin layer chromatography.	**Pass**
Protease Activity (SDS-PAGE) A 20 µl reaction in 1X Heparinase Reaction Buffer containing 24 µg of a standard mixture of proteins and a minimum of 20 units of Bacteroides Heparinase II 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**
Protein Purity Assay (SDS-PAGE) Bacteroides Heparinase II is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
Sulfatase Activity (2-O) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled 2-O-Sulfatase substrate (ΔUA2S-(1-4)-GlcNS6S-AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 37ºC results in no detectable activity as determined by thin layer chromatography.	**Pass**
Sulfatase and Uronidase Activity (N,6-O) A 10 µl reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled N,6-O-Sulfatase substrate (ΔUA-(1-4)-GlcNS6S-AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30ºC 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.

Alicia Bielik
Production Scientist
23 Jul 2020

Michael Tonello
Packaging Quality Control Inspector
23 Jul 2020