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.*
Lot Number:	*10020493*
Expiration Date:	*09/2019*
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	10020494	**Pass**
B0735SVIAL	Bacteroides Heparinase Reaction Buffer (10X)	0071803	**Pass**

Assay Name/Specification	**Lot # 10020493**
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 # 10020493
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.

Brad Landgraf
Production Scientist
07 Sep 2018

Michael Tonello
Packaging Quality Control Inspector
02 Oct 2018

nqa ISO 9001 Registered Quality Management
nqa ISO 13485 Registered Medical Devices
nqa ISO 14001 Registered Environmental Management