

## 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  $\mu\text{mol}$  unsaturated oligosaccharides from porcine mucosal heparin per minute at 30°C and pH 7.0 in a total reaction volume of 100  $\mu\text{l}$ .  
**Packaging Lot Number:** 10052582  
**Expiration Date:** 09/2020  
**Storage Temperature:** -80°C  
**Storage Conditions:** 100 mM NaCl, 20 mM Tris-HCl, 1 mM EDTA, 5 mM CaCl<sub>2</sub>, (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	10052581	Pass
B0735SVIAL	Bacteroides Heparinase Reaction Buffer (10X)	10052584	Pass

Assay Name/Specification	Lot # 10052582
<p><b>Protein Purity Assay (SDS-PAGE)</b>            Bacteroides Heparinase II is <math>\geq</math> 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p><b>Protease Activity (SDS-PAGE)</b>            A 20 <math>\mu\text{l}</math> reaction in 1X Heparinase Reaction Buffer containing 24 <math>\mu\text{g}</math> 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.</p>	Pass
<p><b>Glycosidase Activity (<math>\beta</math>1-4 Galactosidase)</b>            A 10 <math>\mu\text{l}</math> reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled <math>\beta</math>-Galactosidase substrate (Gal<math>\beta</math>1-4GlcNAc<math>\beta</math>1-3Gal<math>\beta</math>1-4Glc -AMC) and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30°C results in no detectable activity as determined by thin layer chromatography.</p>	Pass
<p><b>Glycosidase Activity (<math>\beta</math>1-3 Galactosidase)</b>            A 10 <math>\mu\text{l}</math> reaction in Heparinase Reaction Buffer containing 1 nM of fluorescently-labeled <math>\beta</math>-Galactosidase substrate (Gal<math>\beta</math>1-3GlcNAc<math>\beta</math>1-4Gal<math>\beta</math>1-4Glc -AMC)</p>	Pass

Assay Name/Specification	Lot # 10052582
<p>and 8 units of Bacteroides Heparinase II incubated for 20 hours at 30°C results in no detectable activity as determined by thin layer chromatography.</p>	
<p><b>Glycosidase Activity (β-N-Acetylgalactosaminidase)</b> 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 30°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 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 30°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Sulfatase Activity (2-O)</b> 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 37°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>
<p><b>Sulfatase and Uronidase Activity (N,6-O)</b> 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 30°C results in no detectable activity as determined by thin layer chromatography.</p>	<b>Pass</b>

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



Brad Landgraf  
Production Scientist  
09 Sep 2019



Josh Hersey  
Packaging Quality Control Inspector  
05 Nov 2019