

## New England Biolabs Certificate of Analysis


**Product Name:** BssSI-v2  
**Catalog Number:** R0680S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10054786  
**Expiration Date:** 09/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 500 µg/ml BSA, (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0680S/L v2.0

BssSI-v2 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0680SVIAL	BssSI-v2	10054787	Pass
B7204SVIAL	CutSmart® Buffer	10043350	Pass

Assay Name/Specification	Lot # 10054786
<p><b>Functional Testing (15 minute Digest)</b>            A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and 1 µl of BssSI-v2 incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 20-fold over-digestion of Lambda DNA with BssSI-v2, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with BssSI-v2.</p>	Pass
<p><b>Non-Specific DNase Activity (16 hour)</b>            A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 10 units of BssSI-v2 incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b></p>	Pass

Assay Name/Specification	Lot # 10054786
<p>BssSI-v2 is <math>\geq</math> 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p><b>Exonuclease Activity (Radioactivity Release)</b> A 50 <math>\mu</math>l reaction in CutSmart<sup>®</sup> Buffer containing 1 <math>\mu</math>g of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of BssSI-v2 incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	<p><b>Pass</b></p>

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




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Doreen Duquette  
Production Scientist  
17 May 2019




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Jay Minichiello  
Packaging Quality Control Inspector  
04 Oct 2019