

## New England Biolabs Certificate of Analysis

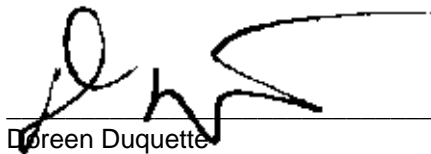
**Product Name:** BssSI-v2  
**Catalog Number:** R0680L  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Lot Number:** 10040821  
**Expiration Date:** 04/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl , 10 mM Tris-HCl (pH 7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 500 µg/ml BSA  
**Specification Version:** PS-R0680S/L v1.0

BssSI-v2 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0680LVIAL	BssSI-v2	10040561	Pass
B7204SVIAL	CutSmart® Buffer	10036665	Pass

Assay Name/Specification	Lot # 10040821
<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 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>Ligation and Recutting (Terminal Integrity)</b>            After a 20-fold over-digestion of Lambda DNA with BssSI, &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.</p>	Pass
<p><b>Functional Test (15 minute Digest)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of BssSI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b></p>	Pass

Assay Name/Specification	Lot # 10040821
<p>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 100 units of BssSai incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> <p><b>Protein Purity Assay (SDS-PAGE)</b> BssSai is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p><b>Pass</b></p>

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



Doreen Duquette  
Production Scientist  
08 Mar 2019



Michael Tonello  
Packaging Quality Control Inspector  
29 Apr 2019