

New England Biolabs Certificate of Analysis

Product Name: BsmBI-v2
Catalog Number: R0739L
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 55°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10139502
Expiration Date: 10/2023
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-R0739S/L v1.0

BsmBI-v2 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0739LVIAL	BsmBI-v2	10123720	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10131976	Pass
B6003SVIAL	NEBuffer™ r3.1	10132773	Pass

Assay Name/Specification	Lot # 10139502
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 units of BsmBI-v2 incubated for 4 hours at 55°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of BsmBI-v2 incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and 1 µl of BsmBI-v2 incubated for 15 minutes at 55°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BsmBI-v2, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated	Pass

Assay Name/Specification	Lot # 10139502
fragments, >95% can be recut with BsmBI-v2.	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 10 units of BsmBI-v2 incubated for 16 hours at 55°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) BsmBI-v2 is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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

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Penghua Zhang
Production Scientist
15 Feb 2022



Josh Hersey
Packaging Quality Control Inspector
15 Feb 2022