

New England Biolabs Certificate of Analysis

Product Name: BsmBI-v2
Catalog Number: R0739S
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: 10072879
Expiration Date: 04/2022
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
R0739SVIAL	BsmBI-v2	10072880	Pass
B7203SVIAL	NEBuffer™ 3.1	10053975	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10065747	Pass


Assay Name/Specification	Lot # 10072879
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
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.	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
Protein Purity Assay (SDS-PAGE) BsmBI-v2 is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

Assay Name/Specification	Lot # 10072879
<p>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.</p>	Pass
<p>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 fragments, >95% can be recut with BsmBI-v2.</p>	Pass

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



JianYing Luo
Production Scientist
11 Apr 2020



Mary Conlon
Packaging Quality Control Inspector
11 Apr 2020