

New England Biolabs Certificate of Analysis

Product Name: BstBI
Catalog Number: R0519S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in rCutSmart Buffer in 1 hour at 65°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10178070
Expiration Date: 12/2024
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0519S/L v2.0

| BstBI Component List | | | |
|----------------------|-----------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0519SVIAL | BstBI | 10171828 | Pass |
| B6004SVIAL | rCutSmart™ Buffer | 10175291 | Pass |

| Assay Name/Specification | Lot # 10178070 |
|---|----------------|
| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 20 units of BstBI incubated for 16 hours at 65°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with BstBI, >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 BstBI.</p> | Pass |
| <p>Functional Testing (15 minute Digest) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of BstBI incubated for 15 minutes at 65°C results in complete digestion as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of BstBI incubated for</p> | Pass |


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|---|--------------------|
| <p>4 hours at 65°C releases <0.1% of the total radioactivity.</p> <p>Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 20 units of BstBI incubated for 4 hours at 65°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | <p>Pass</p> |

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

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YunJie Sun
Production Scientist
08 Dec 2022



Michael Tonello
Packaging Quality Control Inspector
15 Feb 2023