

New England Biolabs Certificate of Analysis

Product Name: BsrDI
Catalog Number: R0574S
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in NEBuffer r2.1 in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10152705
Expiration Date: 06/2024
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)
Specification Version: PS-R0574S/L v2.0

| BsrDI Component List | | | |
|----------------------|-----------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0574SVIAL | BsrDI | 10152646 | Pass |
| B6002SVIAL | NEBuffer™ r2.1 | 10151373 | Pass |

| Assay Name/Specification | Lot # 10152705 |
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| <p>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with BsrDI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with BsrDI.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of BsrDI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | Pass |
| <p>Functional Testing (15 minute Digest) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of Lambda DNA and 1 µl of BsrDI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p> | Pass |
| <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of BsrDI is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results</p> | Pass |

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| <p>are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> <p>Non-Specific DNase Activity (16 Hour) A 50 μl reaction in NEBuffer™ r2.1 containing 1 μg of Lambda DNA and a minimum of 5 units of BsrDI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation 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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Penghua Zhang
Production Scientist
12 Jul 2022



Michael Tonello
Packaging Quality Control Inspector
12 Jul 2022