

## New England Biolabs Certificate of Analysis

**Product Name:** BsrFI-v2  
**Catalog Number:** R0682S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10150015  
**Expiration Date:** 05/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 250 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % Triton® X-100, 200 µg/ml BSA, (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0682S/L v2.0

| BsrFI-v2 Component List |                       |            |                      |
|-------------------------|-----------------------|------------|----------------------|
| NEB Part Number         | Component Description | Lot Number | Individual QC Result |
| R0682SVIAL              | BsrFI-v2              | 10150014   | Pass                 |
| B6004SVIAL              | rCutSmart™ Buffer     | 10150371   | Pass                 |

| Assay Name/Specification  | Lot # 10150015 |
|---|----------------|
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBR322 DNA and a minimum of 10 units of BsrFI-v2 incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass           |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>           BsrFI-v2 is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>  | Pass           |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 10-fold over-digestion of pBR322 DNA with BsrFI-v2, &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 BsrFI-v2.</p>                                  | Pass           |
| <p><b>Functional Testing (15 minute Digest)</b><br/>           A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBR322 DNA and 1 µl of BsrFI-v2 incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.</p>   | Pass           |

| Assay Name/Specification   | Lot # 10150015     |
|--|--------------------|
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>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 30 units of BsrFI-v2 incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> | <p><b>Pass</b></p> |

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

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23 May 2022




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23 May 2022