

New England Biolabs Certificate of Analysis

Product Name: Bsal-HF@v2
Catalog Number: R3733S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10085108
Expiration Date: 02/2022
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 200 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 200 µg/ml BSA, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-R3733S/L v1.0

| Bsal-HF@v2 Component List | | | |
|---------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R3733SVIAL | Bsal-HF@v2 | 10067044 | Pass |
| B7204SVIAL | CutSmart® Buffer | 10078757 | Pass |
| B7024AVIAL | Gel Loading Dye, Purple (6X) | 10084970 | Pass |

| Assay Name/Specification | Lot # 10085108 |
|--|----------------|
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of Bsal-HF@v2 incubated for 4 hours at 37°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 CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of Bsal-HF@v2 incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pXba DNA with Bsal-HF@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 Bsal-HF@v2. | Pass |
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pXba DNA and a minimum of 60 units of Bsal-HF@v2 incubated for 16 hours at 37°C results in a DNA pattern free of | Pass |

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|---|--------------------|
| <p>detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p>Protein Purity Assay (SDS-PAGE) Bsal-HF@v2 is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | <p>Pass</p> |

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

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Production Scientist
05 Oct 2020



Josh Hersey
Packaging Quality Control Inspector
05 Oct 2020