

## New England Biolabs Certificate of Analysis

**Product Name:** Sall-HF®  
**Catalog Number:** R3138S  
**Concentration:** 20,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10204957  
**Expiration Date:** 04/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 300 µg/ml BSA, (pH 7.5 @ 25°C)  
**Specification Version:** PS-R3138S/L/V v2.0

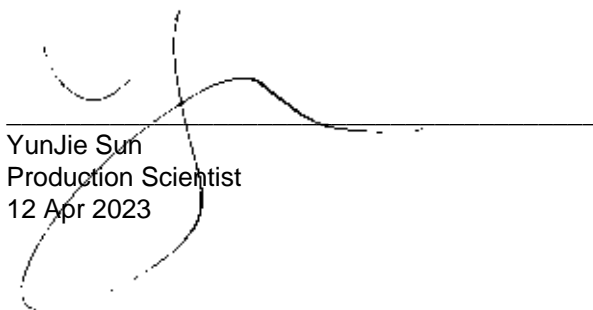
| Sall-HF® Component List |                              |            |                      |
|-------------------------|------------------------------|------------|----------------------|
| NEB Part Number         | Component Description        | Lot Number | Individual QC Result |
| R3138SVIAL              | Sall-HF®                     | 10183138   | Pass                 |
| B7024AVIAL              | Gel Loading Dye, Purple (6X) | 10198646   | Pass                 |
| B6004SVIAL              | rCutSmart™ Buffer            | 10202497   | Pass                 |

| Assay Name/Specification  | Lot # 10204957 |
|---|----------------|
| <b>Blue-White Screening (Terminal Integrity)</b><br>A sample of pUC19 vector linearized with a 10-fold excess of Sall-HF®, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.   | Pass           |
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of Sall-HF® incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass           |
| <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 [ 3H] E. coli DNA and a minimum of 200 units of Sall-HF® incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.  | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 50-fold over-digestion of pBC4XS DNA with Sall-HF®, >95% of the DNA   | Pass           |

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|--|--------------------|
| <p>fragments can be ligated with T4 DNA ligase in 4 hours at 25°C. Of these ligated fragments, &gt;95% can be recut with Sall-HF®.</p> <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 200 units of Sall-HF® 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><b>Pass</b></p> |

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

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YunJie Sun  
Production Scientist  
12 Apr 2023



Josh Hersey  
Packaging Quality Control Inspector  
08 Sep 2023