

## New England Biolabs Certificate of Analysis

**Product Name:** Sall-HF®  
**Catalog Number:** R3138T  
**Concentration:** 100,000 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:** 10150025  
**Expiration Date:** 02/2024  
**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-R3138T/M v2.0

Sall-HF® Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3138TVIAL	Sall-HF®	10139676	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10144740	Pass
B6004SVIAL	rCutSmart™ Buffer	10144738	Pass

Assay Name/Specification	Lot # 10150025
<b>Non-Specific DNase Activity (16 Hour)</b> 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.	Pass
<b>Blue-White Screening (Terminal Integrity)</b> 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> 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> A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and	Pass

Assay Name/Specification	Lot # 10150025
<p>double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 200 units of Sall-HF<sup>®</sup> incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p> <p><b>Ligation and Recutting (Terminal Integrity)</b> After a 50-fold over-digestion of pBC4XS DNA with Sall-HF<sup>®</sup>, &gt;95% of the DNA 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<sup>®</sup>.</p>	<p><b>Pass</b></p>

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

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