

New England Biolabs Certificate of Analysis

Product Name: NheI-HF[®]
Catalog Number: R3131L
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: 10096346
Expiration Date: 01/2023
Storage Temperature: -20°C
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA
Specification Version: PS-R3131S/L v1.0

| NheI-HF [®] Component List | | | |
|-------------------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R3131LVIAL | NheI-HF [®] | 10096345 | Pass |
| B7204SVIAL | CutSmart [®] Buffer | 10092683 | Pass |
| B7024AVIAL | Gel Loading Dye, Purple (6X) | 10089404 | Pass |

| Assay Name/Specification | Lot # 10096346 |
|---|----------------|
| Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of NheI-HF [™] , religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of NheI-HF [™] incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of Lambda HindIII DNA and a minimum of 200 Units of NheI-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 |
| Ligation and Recutting (Terminal Integrity) | Pass |

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| <p>After a 100-fold over-digestion of Lambda HindIII DNA with NheI-HF™, >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 NheI-HF™.</p> <p>Exonuclease Activity (Radioactivity Release) 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 300 units of NheI-HF™ incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | <p>Pass</p> |

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



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Production Scientist
26 Jan 2021



Michael Tonello
Packaging Quality Control Inspector
26 Jan 2021