

New England Biolabs Certificate of Analysis

Product Name: *Nrul-HF*[®]
Catalog Number: R3192S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10079648
Expiration Date: 07/2022
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl , 10 mM Tris-HCl (pH pH 7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 200 µg/ml BSA
Specification Version: PS-R3192S/L v1.0

Nrul-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3192SVIAL	Nrul-HF [®]	10079646	Pass
B7204SVIAL	CutSmart [®] Buffer	10071079	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10082183	Pass

Assay Name/Specification	Lot # 10079648
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 100 units of Nrul-HF incubated for 4 hours at 37°C results in <10% 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 Nrul-HF incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Test (15 minute Digest) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of Lambda DNA and 1 µl of Nrul-HF incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with Nrul-HF, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments,	Pass

Assay Name/Specification	Lot # 10079648
>95% can be recut with NruI-HF.	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of NruI-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>	Pass
<p>Protein Purity Assay (SDS-PAGE) NruI-HF is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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.



Penghua Zhang
Production Scientist
27 Aug 2020



Josh Hersey
Packaging Quality Control Inspector
27 Aug 2020