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## New England Biolabs Certificate of Analysis

Product Name: Nrul

Catalog Number: R0192T

Concentration: 50,000 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: 10082596
Expiration Date: 06/2022
Storage Temperature: -20°C

Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50%

Glycerol, 200 µg/ml BSA

Specification Version: PS-R0192T/M v1.0

| Nrul Component List    |                       |            |                      |  |
|------------------------|-----------------------|------------|----------------------|--|
| <b>NEB Part Number</b> | Component Description | Lot Number | Individual QC Result |  |
| R0192TVIAL             | Nrul                  | 10076835   | Pass                 |  |
| B7203SVIAL             | NEBuffer™ 3.1         | 10053972   | Pass                 |  |

| Assay Name/Specification   | Lot # 10082596 |
|--|----------------|
| Protein Purity Assay (SDS-PAGE)  | Pass           |
| Nrul is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.   |                |
| Endonuclease Activity (Nicking)  | Pass           |
| A 50 μl reaction in NEBuffer 3.1 containing 1 μg of supercoiled pUC19 DNA and a  |                |
| minimum of 100 units of Nrul incubated for 4 hours at 37°C results in <10%   |                |
| conversion to the nicked form as determined by agarose gel electrophoresis.  |                |
| Exonuclease Activity (Radioactivity Release)   | Pass           |
| A 50 μl reaction in NEBuffer 3.1 containing 1 μg of a mixture of single and  |                |
| double-stranded [ 3H] E. coli DNA and a minimum of 50 units of Nrul incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. |                |
| Thouse at the Proposod No. 17% of the total radioactivity.   |                |
| Ligation and Recutting (Terminal Integrity)  | Pass           |
| After a 10-fold over-digestion of Lambda DNA with Nrul, ~50% 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 Nrul.   |                |
| Non-Specific DNase Activity (16 Hour)  | Pass           |



R0192T / Lot: 10082596

Page 1 of 2

| Assay Name/Specification  | Lot # 10082596 |
|---|----------------|
| A 50 µl reaction in NEBuffer 3.1 containing 1 µg of Lambda DNA and a minimum of 100 units of Nrul incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. |                |

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

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Penghaa Zhang Production Scientist

01 Sep 2020

Michael Tonello

Packaging Quality Control Inspector

01 Sep 2020

