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## New England Biolabs Certificate of Analysis

Product Name: Nrul
Catalog Number: R0192L
Concentration: 10,000 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.

Lot Number: 10028874
Expiration Date: 04/2020
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-R0192S/L v1.0

Nrul Component List				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
R0192LVIAL	Nrul	0301804	Pass	
B7203SVIAL	NEBuffer™ 3.1	10021111	Pass	

Assay Name/Specification	Lot # 10028874
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.	
conversion to the nicked form as determined by agarose gerelectrophoresis.	
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.	
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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.	
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Non-Specific DNase Activity (16 Hour)	Pass



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Assay Name/Specification	Lot # 10028874
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.

Tony Spear-Alfonso Production Scientist

11 Oct 2018

Michael Tonello

Packaging Quality Control Inspector

08 Nov 2018

