

## New England Biolabs Certificate of Analysis

**Product Name:** Ncil  
**Catalog Number:** R0196L  
**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.  
**Lot Number:** 10026283  
**Expiration Date:** 10/2020  
**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-R0196S/L v1.0

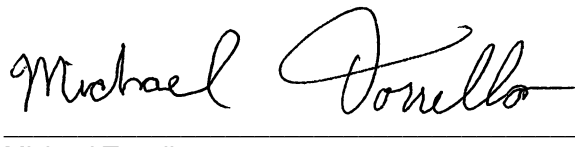
| Ncil Component List |                       |            |                      |
|---------------------|-----------------------|------------|----------------------|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |
| R0196LVIAL          | Ncil                  | 10026284   | Pass                 |
| B7204SVIAL          | CutSmart® Buffer      | 10021119   | Pass                 |

| Assay Name/Specification  | Lot # 10026283 |
|---|----------------|
| <p><b>Exonuclease Activity (Radioactivity Release)</b><br/>           A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 200 units of Ncil incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>  | Pass           |
| <p><b>Ligation and Recutting (Terminal Integrity)</b><br/>           After a 10-fold over-digestion of Lambda DNA with Ncil, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with Ncil.</p>   | Pass           |
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>           A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 20 Units of Ncil 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><b>Protein Purity Assay (SDS-PAGE)</b><br/>           Ncil 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.



Tony Spear-Alfonso  
Production Scientist  
16 Oct 2018



Michael Tonello  
Packaging Quality Control Inspector  
13 Nov 2018