

## New England Biolabs Certificate of Analysis

**Product Name:** RsrII  
**Catalog Number:** R0501S  
**Concentration:** 5,000 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:** 10029108  
**Expiration Date:** 11/2019  
**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-R0501S/L v1.0

| RsrII Component List |                       |            |                      |
|----------------------|-----------------------|------------|----------------------|
| NEB Part Number      | Component Description | Lot Number | Individual QC Result |
| R0501SVIAL           | RsrII                 | 10029109   | Pass                 |
| B7204SVIAL           | CutSmart® Buffer      | 10021118   | Pass                 |

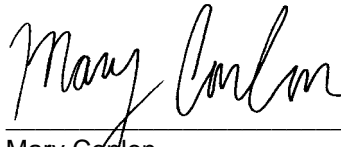
| Assay Name/Specification   | Lot # 10029108 |
|--|----------------|
| <p><b>Endonuclease Activity (Nicking)</b><br/>           A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of RsrII incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>           | Pass           |
| <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 50 units of RsrII 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 RsrII, &gt;95% 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 RsrII.</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 50 Units of RsrII 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           |

| Assay Name/Specification   | Lot # 10029108     |
|--|--------------------|
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>RsrII is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | <p><b>Pass</b></p> |

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



Tony Spear-Alfonso  
Production Scientist  
01 Oct 2018



Mary Conlon  
Packaging Quality Control Inspector  
12 Nov 2018