

New England Biolabs Certificate of Analysis

Product Name: *EcoRI*
Catalog Number: *R0101S*
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 NEBuffer EcoRI/SspI in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10242547*
Expiration Date: *02/2026*
Storage Temperature: *-20°C*
Storage Conditions: *300 mM NaCl, 10 mM KPO₄, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml rAlbumin (pH 7.5 @ 25°C)*
Specification Version: *PS-R0101S/L/E v4.0*

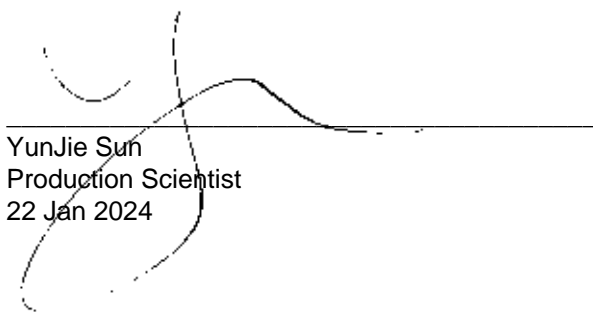
| EcoRI Component List | | | |
|----------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0101SVIAL | EcoRI | 10227213 | Pass |
| B7024AVIAL | Gel Loading Dye, Purple (6X) | 10236422 | Pass |
| B0101SVIAL | NEBuffer™ EcoRI/SspI | 10228814 | Pass |

| Assay Name/Specification | Lot # 10242547 |
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| Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of EcoRI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer EcoRI/SspI containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 200 units of EcoRI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Functional Testing (15 minute Digest) A 50 µl reaction in 1X NEBuffer EcoRI/SspI containing 1 µg of Lambda DNA and 1 µl of EcoRI 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 EcoRI, >95% of the DNA fragments | Pass |

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| <p>can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with EcoRI.</p> | |
| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer EcoRI/SspI containing 1 µg of Lambda DNA and a minimum of 100 units of EcoRI 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) EcoRI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 20 units of EcoRI is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> | Pass |

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

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22 Jan 2024



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04 Jun 2024