

New England Biolabs Certificate of Analysis

Product Name: EcoRI-HF[®]
Catalog Number: R3101T
Concentration: 100,000 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: 10035423
Expiration Date: 02/2021
Storage Temperature: -20°C
Storage Conditions: 300 mM NaCl, 10 mM KPO₄, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % TritonX-100, 200 µg/ml BSA, (pH 7.0 @ 25°C)
Specification Version: PS-R3101T/M v2.0

| EcoRI-HF [®] Component List | | | |
|--------------------------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R3101TVIAL | EcoRI-HF [®] | 10035422 | Pass |
| B7204SVIAL | CutSmart [®] Buffer | 10031569 | Pass |
| B7024SVIAL | Gel Loading Dye, Purple (6X) | 10038710 | Pass |

| Assay Name/Specification | Lot # 10035423 |
|--|----------------|
| Protein Purity Assay (SDS-PAGE) EcoRI-HF [™] is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection. | Pass |
| Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of Lambda DNA and a minimum of 100 Units of EcoRI-HF [™] incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of Lambda DNA with EcoRI-HF [™] , >95% 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 EcoRI-HF [™] . | Pass |
| Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of EcoRI-HF [™] , religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies. | Pass |

| Assay Name/Specification | Lot # 10035423 |
|--|----------------|
| <p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 Units of EcoRI-HF™ incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 200 units of EcoRI-HF™ incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> | Pass |

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



Stephanie Cornelio
Production Scientist
15 Feb 2019



Michael Tonello
Packaging Quality Control Inspector
12 Apr 2019