

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: 10022789
Expiration Date: 08/2020
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 [®]	10018495	Pass
B7204SVIAL	CutSmart [®] Buffer	10018442	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10018415	Pass

Assay Name/Specification	Lot # 10022789
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.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart [™] Buffer containing 1 µg of a mixture of single and double-stranded [³ H] 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.	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
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	Pass

Assay Name/Specification	Lot # 10022789
of detectable nuclease degradation as determined by agarose gel electrophoresis.	
<p>Protein Purity Assay (SDS-PAGE) EcoRI-HF™ is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>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.</p>	Pass

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



Stephanie Cornelio
Production Scientist
09 Aug 2018



Michael Tonello
Packaging Quality Control Inspector
26 Sep 2018