

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

## New England Biolabs Certificate of Analysis

Product Name: EcoRI-HF®
Catalog Number: R3101S
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.

Packaging Lot Number: 10200663
Expiration Date: 01/2025
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-R3101S/L v2.0

EcoRI-HF® Component List				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
R3101SVIAL	EcoRI-HF®	10176738	Pass	
B7024AVIAL	Gel Loading Dye, Purple (6X)	10193044	Pass	
B6004SVIAL	rCutSmart™ Buffer	10196036	Pass	

Assay Name/Specification	Lot # 10200663
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
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 [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.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> 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	Pass



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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

YunJie Sun \
Production Scientist

18 Jan 2023

Josh Hersey

Packaging Quality Control Inspector

03 Aug 2023



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