

New England Biolabs Certificate of Analysis

Product Name: EcoRV-HF[®]
Catalog Number: R3195S
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.
Lot Number: 10013143
Expiration Date: 12/2019
Storage Temperature: -20°C
Storage Conditions: 200 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R3195S/L v1.0

EcoRV-HF [®] Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R3195SVIAL	EcoRV-HF [®]	0061712	Pass
B7204SVIAL	CutSmart [®] Buffer	3091805	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	0251805	Pass

Assay Name/Specification	Lot # 10013143
Protein Purity Assay (SDS-PAGE) EcoRV-HF [™] is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	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 100 units of EcoRV-HF [™] incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of EcoRV-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 20 Units of EcoRV-HF [™] incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10013143
<p>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 EcoRV-HF™ 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>Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with EcoRV-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 EcoRV-HF™.</p>	Pass

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



Penghua Zhang
Production Scientist
19 Jun 2018



Michael Tonello
Packaging Quality Control Inspector
19 Jun 2018