

New England Biolabs Certificate of Analysis

Product Name: *EcoRI*
Catalog Number: *R0101L*
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/Sspl in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10227225*
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*

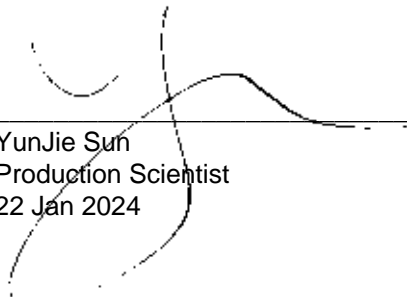
EcoRI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0101LVIAL	EcoRI	10227216	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10221469	Pass
B0101SVIAL	NEBuffer™ EcoRI/Sspl	10202104	Pass

Assay Name/Specification	Lot # 10227225
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/Sspl 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/Sspl 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

Assay Name/Specification	Lot # 10227225
<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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23 Feb 2024