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New England Biolabs
Product Specification

Product Name:	*EcoRI*
Catalog #:	*R0101T/M*
Concentration:	*100,000 units/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.*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*300 mM NaCl, 10 mM KPO_4 (pH 7.5), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA*
Specification Version:	*PS-R0101T/M v3.0*
Effective Date:	*02 Nov 2021*

Assay Name/Specification (minimum release criteria)
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.
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in 1X NEBuffer EcoRI/SspI 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.
Ligation and Recutting (Terminal Integrity) - After a 20-fold over-digestion of Lambda DNA with EcoRI, >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.
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in 1X 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.
Protein Purity Assay (SDS-PAGE) - EcoRI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.

One or more products referenced in this document may be covered by a 3rd-party trademark.
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Date 02 Nov 2021

Derek Robinson
Director, Quality Control

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