NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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www.neb.com
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New England Biolabs
Certificate of Analysis

Product Name:	*EcoO109I*
Catalog Number:	*R0503S*
Concentration:	*20,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (Hind III digest) in 1 hour at 37°C in a total reaction volume of 50 µl.*
Lot Number:	*10029821*
Expiration Date:	*11/2020*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 200 µg/ml BSA , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0503S/L v2.0*

EcoO109I Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0503SVIAL	EcoO109I	10029822	**Pass**
B7204SVIAL	CutSmart® Buffer	10021120	**Pass**

Assay Name/Specification	**Lot # 10029821**
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of EcoO109I, 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 60 Units of EcoO109I incubated for 4 hours at 37ºC 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 100 units of EcoO109I incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pBR322 DNA with EcoO109I, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated	**Pass**

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Assay Name/Specification	Lot # 10029821
fragments, >95% can be recut with EcoO109I. **Non-Specific DNase Activity (16 Hour)** A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 100 Units of EcoO109I incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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

Tony Spear-Alfonso
Production Scientist
02 Nov 2018

Michael Tonello
Packaging Quality Control Inspector
28 Nov 2018