

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: 10044773
Expiration Date: 05/2021
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	10044775	Pass
B7204SVIAL	CutSmart® Buffer	10042965	Pass

Assay Name/Specification	Lot # 10044773
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 EcoO109I incubated for 4 hours at 37°C 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 16°C. Of these ligated fragments, >95% can be recut with EcoO109I.	Pass
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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Blue-White Screening (Terminal Integrity) A sample of pUC19 vector linearized with a 10-fold excess of EcoO109I, religated	Pass

Assay Name/Specification	Lot # 10044773
<p>and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.</p> <p>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 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p>Pass</p>

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



Ben Penta
Production Scientist
08 May 2019



Michael Tonello
Packaging Quality Control Inspector
21 May 2019