

New England Biolabs Certificate of Analysis

Product Name: EcoGII Methyltransferase
Catalog Number: M0603S
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to completely protect 100 ng of a FAM-labeled dsDNA substrate in 30 minutes at 37°C in a total reaction volume of 20 µL against cleavage by MboI restriction endonuclease as determined by capillary electrophoresis.
Packaging Lot Number: 10246677
Expiration Date: 04/2026
Storage Temperature: -20°C
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.15 % TritonX-100, 180 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-M0603S/L v2.0

EcoGII Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0603SVIAL	EcoGII Methyltransferase	10234146	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10233985	Pass
B6004SVIAL	rCutSmart™ Buffer	10241728	Pass

Assay Name/Specification	Lot # 10246677
Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 25 units of EcoGII Methyltransferase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 25 units of EcoGII Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Functional Testing (Methyltransferase) A 20 µl reaction in rCutSmart™ Buffer supplemented with 160 µM SAM containing 100 ng of an 80 bp FAM-labeled dsDNA substrate and 0.5 units of EcoGII Methyltransferase incubated for 30 minutes at 37°C followed by heat inactivation results in ≥ 70%	Pass

Assay Name/Specification	Lot # 10246677
<p>protection from digestion with 5 units of MboI incubated at 37°C for 30 minutes as determined by capillary electrophoresis.</p>	
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 25 units of EcoGII Methyltransferase 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) EcoGII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of EcoGII Methyltransferase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass

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

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Nicole Castagnozzi
Production Scientist
25 Apr 2024



Michael Tonello
Packaging Quality Control Inspector
11 Jun 2024