

New England Biolabs Certificate of Analysis

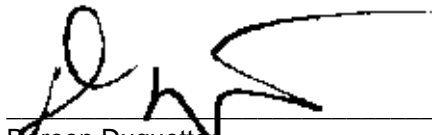
Product Name: EcoGII Methyltransferase
Catalog Number: M0603S
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to completely protect 100 ng of a FAM-labeled dsDNA substrate in 30 minutes at 37°C in a total reaction volume of 20 µL against cleavage by MboI restriction endonuclease as determined by capillary electrophoresis.
Lot Number: 10052721
Expiration Date: 08/2021
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, 200 µg/ml BSA, (pH 7.4 @ 25°C)
Specification Version: PS-M0603S/L v1.0

EcoGII Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0603SVIAL	EcoGII Methyltransferase	10052722	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10049759	Pass
B7204SVIAL	CutSmart® Buffer	10046082	Pass

Assay Name/Specification	Lot # 10052721
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® 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 CutSmart® 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 CutSmart® 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 # 10052721
<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 CutSmart® 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.



Doreen Duquette
Production Scientist
02 Aug 2019



Josh Hersey
Packaging Quality Control Inspector
30 Sep 2019