

New England Biolabs Certificate of Analysis

Product Name: EcoGII Methyltransferase
Catalog #: M0603
Concentration: 5,000 units/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 #: 0031702
Assay Date: 02/2017
Expiration Date: 02/2019
Storage Temp: -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
Effective Date: 19 Jan 2017

Assay Name/Specification (minimum release criteria)	Lot #0031702
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] <i>E. coli</i> 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% protection from digestion with 5 units of MboI incubated at 37°C for 30 minutes as determined by capillary electrophoresis.	Pass
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.	Pass
Protein Purity Assay (SDS-PAGE) - EcoGII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass



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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.	Pass

* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Authorized by
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19 Jan 2017



Inspected by
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08 Feb 2017

