

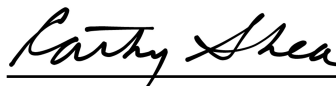
New England Biolabs Certificate of Analysis

Product Name: DNA Gyrase (*E. coli*)
Catalog #: M0306S/L
Concentration: 5,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme that catalyzes the conversion of 0.5 µg DNA Gyrase (*E. coli*) Substrate to >95% supercoiled plasmid in a total reaction volume of 30 µl in 30 minutes at 37°C.
Lot #: 0021609
Assay Date: 09/2016
Expiration Date: 9/2017
Storage Temp: -80°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 2 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0306S/L v1.0
Effective Date: 17 Jun 2016

Assay Name/Specification (minimum release criteria)	Lot #0021609
Endonuclease Activity (Nicking) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 25 units of DNA Gyrase (<i>E. coli</i>) 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 DNA Gyrase (<i>E. coli</i>) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	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 25 units of DNA Gyrase (<i>E. coli</i>) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
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 DNA Gyrase (<i>E. coli</i>) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass



Authorized by
Derek Robinson
17 Jun 2016



Inspected by
Cathy Shea
21 Sep 2016

