

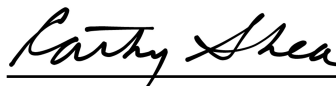
New England Biolabs Certificate of Analysis

Product Name: Topoisomerase I (*E. coli*)
Catalog #: M0301S/L
Concentration: 5,000 units/ml
Unit Definition: One unit is defined as the amount of enzyme that catalyzes the relaxation of > 95% of 0.5 µg of negatively supercoiled pUC19 RF I DNA in a total reaction volume of 25 µl in 15 minutes at 37°C.
Lot #: 0081609
Assay Date: 09/2016
Expiration Date: 9/2017
Storage Temp: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 35 mM (NH₄)₂SO₄, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0301S/L v1.0
Effective Date: 03 Aug 2016

Assay Name/Specification (minimum release criteria)	Lot #0081609
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 50 units of Topoisomerase I (<i>E. coli</i>) incubated for 4 hours at 37°C releases <0.5% of the total radioactivity.	Pass
qPCR DNA Contamination (<i>E. coli</i> Genomic) - A minimum of 5 units of Topoisomerase I (<i>E. coli</i>) is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.	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 Topoisomerase I (<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
03 Aug 2016



Inspected by
Cathy Shea
21 Sep 2016

