

New England Biolabs Certificate of Analysis

Product Name: *Topoisomerase I (E. coli)*
Catalog Number: M0301S
Concentration: 5,000 U/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.
Packaging Lot Number: 10077439
Expiration Date: 04/2021
Storage Temperature: -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

Topoisomerase I (E. coli) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0301SVIAL	Topoisomerase I (E. coli)	10072604	Pass
B7204SVIAL	CutSmart® Buffer	10075571	Pass

Assay Name/Specification	Lot # 10077439
<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 Topoisomerase I (E. coli) 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.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of Topoisomerase I (E. coli) is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of Topoisomerase I (E. coli) incubated for 4 hours at 37°C releases <0.5% of the total radioactivity.</p>	Pass

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



Ana Egana
Production Scientist
22 Jul 2020



Michael Tonello
Packaging Quality Control Inspector
22 Jul 2020