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## New England Biolabs Certificate of Analysis

Product Name: E.coli DNA Ligase

Catalog Number: M0205L
Concentration: 10,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to give 50%

ligation of 6 µg of Lambda-HindIII DNA in 30 minutes at 16°C in a

total reaction volume of 20 μl.

Lot Number: 10044925
Expiration Date: 11/2020
Storage Temperature: -20°C

Storage Conditions: 10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 200 µg/ml BSA

, 50 % Glycerol, (pH 7.4 @ 25°C)

Specification Version: PS-M0205S/L v2.0

E.coli DNA Ligase Component List				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
M0205LVIAL	E.coli DNA Ligase	10028142	Pass	
B0205SVIAL	E. coli DNA Ligase Reaction Buffer	10029823	Pass	

Assay Name/Specification	Lot # 10044925
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of E. coli DNA Ligase 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 [ ³H] E. coli DNA and a minimum of 50 units of E. coli DNA Ligase 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 CIP-treated Lambda-HindIII DNA and a minimum of 20 units of E. coli DNA Ligase 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) E. coli DNA Ligase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie	Pass



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Assay Name/Specification	Lot # 10044925
Blue detection.	
qPCR DNA Contamination (E. coli Genomic)  A minimum of 10 units of E. coli DNA Ligase 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.	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 E. coli DNA Ligase 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

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

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Mary Lorenzen
Production Scientist
15 Nov 2018

Michael Tonello

Packaging Quality Control Inspector

02 Jul 2019

