

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 1 (ssRNA Ligase)
Catalog Number: M0204S
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to convert 1 nanomole of 5'-[³²P] rA16 into a phosphatase-resistant form in 30 minutes at 37°C.
Lot Number: 10015225
Expiration Date: 04/2020
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0204S/L v1.0

T4 RNA Ligase 1 (ssRNA Ligase) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0204SVIAL	T4 RNA Ligase 1 (ssRNA Ligase)	0671804	Pass
B1004AVIAL	PEG 8000	10009392	Pass
B0756AVIAL	Adenosine-5'-Triphosphate (ATP)	10010616	Pass
B0216SVIAL	T4 RNA Ligase Reaction Buffer	10008137	Pass

Assay Name/Specification	Lot # 10015225
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of T4 RNA Ligase 1 (ssRNA 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.</p>	Pass
<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 T4 RNA Ligase 1 (ssRNA 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.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µL reaction in T4 RNA Ligase 1 Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase) incubated</p>	Pass

Assay Name/Specification	Lot # 10015225
<p>for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in T4 RNA Ligase 1 Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> <p>Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 1 (ssRNA Ligase) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p style="text-align: center;">Pass</p> <p style="text-align: center;">Pass</p>

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



Bo Wu
Production Scientist
17 May 2018



Michael Tonello
Packaging Quality Control Inspector
26 Jul 2018