

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 1 (ssRNA Ligase)
Catalog Number: M0437M
Concentration: 30,000 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.
Packaging Lot Number: 10075389
Expiration Date: 12/2021
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0437M v1.0

T4 RNA Ligase 1 (ssRNA Ligase) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N0437AVIAL	ATP	10061043	Pass
M0437MVIAL	T4 RNA Ligase 1 (ssRNA Ligase), High Concentration	10061041	Pass
B1004SVIAL	PEG 8000	10076162	Pass
B0216SVIAL	T4 RNA Ligase Reaction Buffer	10069909	Pass

Assay Name/Specification	Lot # 10075389
<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), High Concentration incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<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), High Concentration incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 1 (ssRNA Ligase), High Concentration is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

Assay Name/Specification	Lot # 10075389
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 10 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration 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 RNA transcript and a minimum of 30 units of T4 RNA Ligase 1 (ssRNA Ligase), High Concentration is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using gel electrophoresis.</p>	Pass

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



Bhairavi Jani
Production Scientist
10 Jul 2020



Michael Tonello
Packaging Quality Control Inspector
10 Jul 2020