

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: 10094806
Expiration Date: 05/2023
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 | 10110921 | Pass |
| M0437MVIAL | T4 RNA Ligase 1 (ssRNA Ligase), High Concentration | 10094807 | Pass |
| B1004SVIAL | PEG 8000 | 10098513 | Pass |
| B0216SVIAL | T4 RNA Ligase Reaction Buffer | 10102210 | Pass |

| Assay Name/Specification | Lot # 10094806 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 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. | Pass |
| 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 [³ H] 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. | Pass |
| 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. | Pass |

| Assay Name/Specification | Lot # 10094806 |
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| <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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Bhairavi Jani
Production Scientist
24 May 2021



Michael Tonello
Packaging Quality Control Inspector
24 May 2021