

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 2
Catalog Number: M0239L
Concentration: 10,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to ligate 0.4 µg of an equimolar mix of a 23-mer and 17-mer RNAs in a total reaction volume of 20 µl in 30 minutes at 37°C.
Lot Number: 10016831
Expiration Date: 07/2020
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 0.1 mM DTT, 0.1 mM EDTA, 35 mM (NH₄)₂SO₄, 50 % Glycerol, (pH 7.5 @ 25°C)
Specification Version: PS-M0239S/L v1.0

T4 RNA Ligase 2 Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0239LVIAL	T4 RNA Ligase 2 (dsRNA Ligase)	10015139	Pass
B0239SVIAL	T4 RNA Ligase 2 Reaction Buffer	0081802	Pass

Assay Name/Specification	Lot # 10016831
<p>RNase Activity (Extended Digestion) A 10 µl reaction in T4 RNA Ligase Reaction Buffer containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of T4 RNA Ligase 2 (dsRNA Ligase) is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using agarose gel electrophoresis.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in T4 RNA Ligase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of T4 RNA Ligase 2 (dsRNA Ligase) 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 Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of T4 RNA Ligase 2 (dsRNA Ligase) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass

Assay Name/Specification	Lot # 10016831
<p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of T4 RNA Ligase 2 (dsRNA Ligase) incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	Pass
<p>Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 2 (dsRNA Ligase) is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass

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



Bo Wu
Production Scientist
18 Jul 2018



Michael Tonello
Packaging Quality Control Inspector
25 Jul 2018