

New England Biolabs Certificate of Analysis

Product Name: T4 RNA Ligase 2, truncated KQ
Catalog Number: M0373S
Concentration: 200,000 U/ml
Unit Definition: 200 units is defined as the amount of enzyme required to give 80% ligation of a 31-mer RNA to the pre-adenylated end of a 17-mer DNA in a total reaction volume of 20 µl in 1 hour at 25°C.
Lot Number: 10028369
Expiration Date: 11/2020
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0373S/L v2.0

T4 RNA Ligase 2, truncated KQ Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0373SVIAL	T4 RNA Ligase 2, truncated KQ	10028371	Pass
B1004SVIAL	PEG 8000	10015226	Pass
B0216SVIAL	T4 RNA Ligase Reaction Buffer	10008137	Pass

Assay Name/Specification	Lot # 10028369
Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 2, truncated KQ is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	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 200 units of T4 RNA Ligase 2, truncated KQ 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
Endonuclease Activity (Nicking) A 50 µl reaction in T4 RNA Ligase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of T4 RNA Ligase 2, truncated KQ 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)	Pass

Assay Name/Specification	Lot # 10028369
<p>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 200 units of T4 RNA Ligase 2, truncated KQ incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p> <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 200 units of T4 RNA Ligase 2, truncated KQ incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	<p>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
03 Dec 2018