NEW ENGLAND BioLabs Inc.
be INSPIRED drive DISCOVERY stay GENUINE
240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

New England Biolabs
Certificate of Analysis

Product Name:	*T4 RNA Ligase 2, truncated K227Q*
Catalog Number:	*M0351S*
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.*
Packaging Lot Number:	*10163626*
Expiration Date:	*09/2024*
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-M0351S/L v2.0*

T4 RNA Ligase 2, truncated K227Q Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0351SVIAL	T4 RNA Ligase 2, truncated K227Q	10163625	**Pass**
B1004SVIAL	PEG 8000	10115452	**Pass**
B0216SVIAL	T4 RNA Ligase Reaction Buffer	10122381	**Pass**

Assay Name/Specification	**Lot # 10163626**
Protein Purity Assay (SDS-PAGE) T4 RNA Ligase 2, truncated K227Q is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue 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 K227Q 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 Reaction Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 200 units of T4 RNA Ligase 2, truncated K227Q incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
RNase Activity (Extended Digestion)	**Pass**

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Assay Name/Specification	Lot # 10163626
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 K227Q 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.	
Phosphatase Activity (pNPP) A 200 ul 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 K227Q incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.	**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.

Bo Wu
Production Scientist
20 Sep 2022

Josh Hersey
Packaging Quality Control Inspector
02 Nov 2022