NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*RNase H*
Catalog Number:	*M0297L*
Concentration:	*5,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to produce 1 nmol of ribonucleotides from 20 picomoles of a fluorescently labeled 50 base pair RNA-DNA hybrid in a total reaction volume of 50 µl in 20 minutes at 37°C.*
Packaging Lot Number:	*10204800*
Expiration Date:	*05/2025*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 200 µg/ml BSA , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-M0297S/L v1.0*

RNase H Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0297LVIAL	RNase H	10187137	**Pass**
B0297SVIAL	RNase H Reaction Buffer	10168999	**Pass**

Assay Name/Specification	**Lot # 10204800**
Endonuclease Activity (Nicking) A 50 µl reaction in RNase H Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of RNase H incubated for 4 hours at 37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release, Single Stranded) A 50 µl reaction in RNase H Reaction Buffer containing 1 µg of single stranded [^{3}H] E. coli DNA and a minimum of 50 units of RNase H incubated for 30 minutes at 37°C releases <0.1 of the total radioactivity.	**Pass**
Protein Purity Assay (SDS-PAGE) RNase H 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 1 µl of RNase H is incubated at 37ºC. After incubation for 16	**Pass**

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Assay Name/Specification	Lot # 10204800
hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	
qPCR DNA Contamination (E. coli Genomic) A minimum of 5 units of RNase H 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.	**Pass**

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

Bo Wu
Production Scientist
28 Apr 2023

Josh Hersey
Packaging Quality Control Inspector
04 Sep 2023