

New England Biolabs Certificate of Analysis

Product Name: RNase H
Catalog Number: M0297S
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: 10139018
Expiration Date: 10/2023
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
M0297SVIAL	RNase H	10123429	Pass
B0297SVIAL	RNase H Reaction Buffer	10111600	Pass

Assay Name/Specification	Lot # 10139018
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 37°C 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
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 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
qPCR DNA Contamination (E. coli Genomic)	Pass

Assay Name/Specification	Lot # 10139018
<p>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.</p> <p>Protein Purity Assay (SDS-PAGE) RNase H is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<p>Pass</p>

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

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Timothy Meixsell
Production Scientist
21 Feb 2022



Josh Hersey
Packaging Quality Control Inspector
21 Feb 2022