

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: 10157346
Expiration Date: 05/2024
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 | 10150795 | Pass |
| B0297SVIAL | RNase H Reaction Buffer | 10140272 | Pass |

| Assay Name/Specification | Lot # 10157346 |
|---|----------------|
| 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 |
| 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 |
| 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 |
| Protein Purity Assay (SDS-PAGE) | Pass |

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|--|--------------------|
| <p>RNase H is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p>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.</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
29 Aug 2022



Erin Varney
Packaging Quality Control Inspector
29 Aug 2022