

New England Biolabs Certificate of Analysis

Product Name: *RNase Inhibitor, Human Placenta*
Catalog Number: *M0307L*
Concentration: *40,000 U/ml*
Unit Definition: *One unit is defined as the amount of RNase Inhibitor, Human Placenta required to inhibit the activity of 5 ng of RNase A by 50%. Activity is measured by the inhibition of hydrolysis of cytidine 2', 3'-cyclic monophosphate by RNase A.*
Packaging Lot Number: *10139643*
Expiration Date: *05/2024*
Storage Temperature: *-20°C*
Storage Conditions: *50 mM KCl, 20 mM HEPES (pH 7.6), 8 mM DTT, 50 % Glycerol*
Specification Version: *PS-M0307S/L v1.0*

RNase Inhibitor, Human Placenta Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0307LVIAL	RNase Inhibitor, Human Placenta	10139641	Pass

Assay Name/Specification	Lot # 10139643
Protein Purity Assay (SDS-PAGE) RNase Inhibitor, Human Placenta is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 40 units of RNase Inhibitor, Human Placenta is incubated at 37°C. After incubation for 4 hours, $>90\%$ of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
Exonuclease Activity (Radioactivity Release) A 50 μ l reaction in NEBuffer 4 containing 1 μ g of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 200 units of RNase Inhibitor, Human Placenta incubated for 4 hours at 37°C releases $<0.1\%$ of the total radioactivity.	Pass
Endonuclease Activity (Nicking) A 50 μ l reaction in NEBuffer 4 containing 1 μ g of supercoiled PhiX174 DNA and a minimum of 40 units of RNase Inhibitor, Human Placenta incubated for 4 hours at 37°C	Pass

Assay Name/Specification	Lot # 10139643
<p>results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p> <p>Latent RNase Activity (Extended Digest) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 40 units of heat inactivated RNase Inhibitor, Human Placenta is incubated at 37°C. After incubation for 4 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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Bhairavi Jani
Production Scientist
13 May 2022



Erin Varney
Packaging Quality Control Inspector
13 May 2022