NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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www.neb.com
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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.*
Lot Number:	*10051892*
Expiration Date:	*08/2021*
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	10051893	**Pass**

Assay Name/Specification	**Lot # 10051892**
Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 40 units of RNase Inhibitor, Human Placenta 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) A 50 µl reaction in NEBuffer 4 containing 1 µg 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 37ºC releases <0.1% of the total radioactivity.	**Pass**
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.	**Pass**
Protein Purity Assay (SDS-PAGE)	**Pass**

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Assay Name/Specification	Lot # 10051892
RNase Inhibitor, Human Placenta is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
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 40 units of RNase Inhibitor, Human Placenta is incubated at 37ºC. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**

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

Dongxian Yue
Production Scientist
13 Aug 2019

Michael Tonello
Packaging Quality Control Inspector
14 Aug 2019