

## New England Biolabs Certificate of Analysis

*Product Name:* M-MuLV Reverse Transcriptase  
*Catalog #:* M0253S/L  
*Concentration:* 200,000 units/ml  
*Unit Definition:* One unit is defined as the amount of enzyme required to incorporate 1 nmol of dTTP into an acid-insoluble form in 10 minutes at 37°C.  
*Lot #:* 0281706  
*Assay Date:* 06/2017  
*Expiration Date:* 06/2019  
*Storage Temp:* -20°C  
*Storage Conditions:* 50 mM Tris-HCl, 150 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.1 % IGEPAL® CA-630, 50 % Glycerol, (pH 7.6 @ 25°C)  
*Specification Version:* PS-M0253S/L v1.0  
*Effective Date:* 15 Feb 2017

Assay Name/Specification (minimum release criteria)	Lot #0281706
<b>Endonuclease Activity (Nicking)</b> - A 50 µl reaction in M-MuLV Reverse Transcriptase Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of M-MuLV Reverse Transcriptase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 µl reaction in M-MuLV Reverse Transcriptase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 200 units of M-MuLV Reverse Transcriptase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 Hour)</b> - A 50 µl reaction in M-MuLV Reverse Transcriptase Reaction Buffer containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 200 units of M-MuLV Reverse Transcriptase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>
<b>RNase Activity Assay (2 Hour Digestion)</b> - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of M-MuLV Reverse Transcriptase incubated for 2 hours at 37°C results in no detectable degradation of the RNA as determined by gel electrophoresis using fluorescent detection.	<b>Pass</b>



Authorized by  
Derek Robinson  
15 Feb 2017



Inspected by  
Tony Spear-Alfonso  
02 Aug 2017

