NEW ENGLAND BioLabs® Inc.

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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 #:	*0291709*
Assay Date:	*09/2017*
Expiration Date:	*9/2019*
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:	*16 Jun 2017*

Assay Name/Specification (minimum release criteria)	**Lot #0291709**
Endonuclease Activity (Nicking) - 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.	**Pass**
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in M-MuLV Reverse Transcriptase Reaction Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* 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.	**Pass**
Non-Specific DNase Activity (16 Hour) - 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.	**Pass**
RNAse Activity Assay (2 Hour 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 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.	**Pass**

Authorized by
Derek Robinson
16 Jun 2017

Inspected by
Tony Spear-Alfonso
19 Sep 2017

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices