

Certificate of Analysis

TaqMan™ Advanced miRNA cDNA Synthesis Kit

Product No. A28007, 15451034

Lot No. 3100046

Date of Manufacture 19-Nov-2024

Expiration Date 01-Aug-2025

Kit Component Performance Testing

Poly A Enzyme

RNase Assay

Specification: Incubation of a 10 µl reaction containing a minimum of 5 units of E. coli Poly(A) Polymerase with 40 ng of RNA transcript for 4 hours at 37°C results in >90% of the substrate RNA intact as determined by gel electrophoresis using fluorescent detection.

Result: Meets specification

DNA Exonuclease Activity

Specification: Incubation of a 50 µl reaction containing 15 units of E. coli Poly(A) Polymerase with 1 µg of mixed single and double-stranded [³H] E. coli DNA for 4 hours at 37°C releases < 0.1% of the total radioactivity.

Result: Meets specification

DNA Endonuclease Activity:

Specification: Incubation of a 50 µl reaction containing a minimum of 15 units of E. coli Poly(A) Polymerase with 1 µg of supercoiled PhiX174 DNA for 4 hours at 37°C resulted in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

Result: Meets specification

RNA Ligase, 10U/uL

RNase Assay

Specification: Incubation of a 10 µl reaction containing a minimum of 1µl of T4 RNA Ligase 1 with 40 ng of RNA transcript for 16 hours at 37°C results in >90% of the substrate RNA intact as determined by gel electrophoresis using fluorescent detection

Result: Meets specification

DNA Exonuclease Activity

Specification: Incubation of a 50 µl reaction containing a minimum of 30 units of T4 RNA Ligase 1 with 1 µg of mixed single and double-stranded [³H] E.coli DNA for 4 hours at 37°C releases < 0.1% of the total radioactivity.

Result: Meets specification

DNA Endonuclease Activity

Specification: Incubation of a 50 µl reaction containing a minimum of 30 units of T4 RNA Ligase 1 with 1 µg of supercoiled PhiX174 DNA for 4 hours at 37°C resulted in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

Result: Meets specification

10X RT Enzyme Mix

qRT-PCR Functional Assay

Specification: This product is tested functionally in qRT-PCR using total RNA. Kinetic analysis must demonstrate a linear dose response between -3.20 and -3.60 over six orders of magnitude from 2.5 µg – 2.5 pg with a correlation coefficient ≥ 0.990 .

Result: Meets specification

2X miR-Amp Master Mix

Bulk samples are subjected to a panel of quality control tests to provide the highest level of performance and lot-to-lot.

Deoxynucleoside triphosphate (dNTP) Concentration

Specification: Deoxynucleoside triphosphate (dNTP) concentrations individually measured by HPLC.

Result: Meets specification

Magnesium ion (Mg^{2+}) Concentration

Specification: Magnesium ion (Mg^{2+}) concentration measured by ion chromatography.

Result: Meets specification

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