

Certificate of Analysis for NR-41331

Schistosoma mansoni, Beta-Tubulin Gene Forward Primer

Catalog No. NR-41331

This reagent is the tangible property of the U.S. Government.

Product Description: NR-41331 contains a twenty-five nucleotide forward primer designed to amplify the beta-tubulin gene from *Schistosoma mansoni* (*S. mansoni*) when paired with the beta-tubulin reverse primer (NR-41367). The sequence of the beta-tubulin forward 25-mer is 5'-CACCTTTTCAGTTGTTCCCTCTCCC-3'.

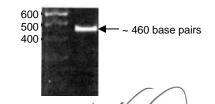
Lot¹: 61433124 Manufacturing Date: 17MAY2012

TEST	SPECIFICATIONS	RESULTS
PCR Assay of Extracted Nucleic Acid ^{2,3,4}	460 base pair amplican	460 hass pair ampliant (Figure 1)
Amplicon size	~ 460 base pair amplicon	~ 460 base pair amplicon (Figure 1)
Primer Characteristics ¹		
Molecular weight	Report results	7446 g/mol
Primer melting temperature (Tm)	Report results	66.2°Č
GC content	Report results	52.0%
Primer concentration	Report results	100 μΜ
Moles of primer	Report results	3.0 nmoles per vial
Micrograms of primer	Report results	22.3 µg per vial
Gene Stability by Quantitative Real-Time PCR	Report results	No statistical significant difference in threshold cycle (Ct) ^{5,6}

¹NR-41331 lot: 61433124 was manufactured by Eurofins MWG Operon. Primer characteristics were determined by the manufacturer. The bulk material was thawed and aliquoted at ATCC[®].

⁶ANOVA test (P value = 0.01)

Figure 1: PCR Amplification of *S. mansoni* Beta-Tubulin Gene using NR-41331 and NR-41367



Date: 18 SEP 2013

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Signature!

Title: Technical Manager, BEI Authentication or designee

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²PCR completed by the Biomedical Research Institute prior to vialing.

³Position 549 to 1008 of GenBank: XM002579060.1

⁴This test showed no cross amplification in mice

⁵²⁰ individual snails were utilized for RT-PCR amplification