

Certificate of Analysis for NR-41333

Biomphalaria glabrata, Actin Gene Forward Primer

Catalog No. NR-41333

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

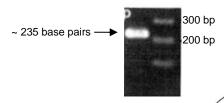
Product Description: NR-41333 contains a twenty nucleotide forward primer designed to amplify the actin gene from *Biomphalaria glabrata* (*B. glabrata*) when paired with the actin reverse primer (NR-41369). The sequence of the actin forward 20-mer is 5'-GCTCCCAGGGCCGTTTTCCC-3'.

Lot¹: 61433126 Manufacturing Date: 17MAY2012

TEST	SPECIFICATIONS	RESULTS
PCR Assay of Extracted Nucleic Acid ^{2,3}		
Biomphalaria glabrata	~ 235 base pair amplicon	~ 235 base pair amplicon (Figure 1)
Schistosoma mansoni	No amplicons	No amplicons
Primer Characteristics ¹		
Molecular weight	Report results	6021 g/mol
Primer melting temperature (Tm)	Report results	68.6°C
GC content	Report results	70.0%
Primer concentration	Report results	100 μM
Moles of primer	Report results	3.0 nmoles per vial
Micrograms of primer	Report results	18.1 μg per vial
Gene Stability by Quantitative Real-Time PCR	Report results	No statistical significant difference in threshold cycle (Ct) ^{4,5}

¹NR-41333 lot: 61433126 was manufactured by Eurofins MWG Operon. Primer characteristics were determined by the manufacturer. The bulk material was thawed and aliquoted at ATCC[®].

Figure 1: PCR Amplification of *B. glabrata* Actin Gene using NR-41333 and NR-41369



Date: 16 SEP 2013

Signature

Title: Technical Manager, BEI Authentication or designee

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

³Position 149 to 381 of GenBank: U53348

⁴20 individual snails were utilized for RT-PCR amplification

⁵ANOVA test (P value = 0.01)