

Diagnostic Plasmid Containing the Small Subunit Ribosomal RNA Gene (18S) from *Plasmodium malariae*

Catalog No. MRA-179

Product Description:

The small subunit ribosomal RNA gene (18S rRNA gene; GenBank: [AF145336](#)) from *Plasmodium malariae* (*P. malariae*) was amplified from genomic DNA by nest 1 PCR primers and cloned into vector pCR2.1-TOPO (Invitrogen®). The resulting plasmid (clone 34) may be used in PCR assays for the diagnosis of mixed species malaria infections. The seed lot material was grown in Luria-Bertani broth with kanamycin (5 µg per mL) for 1 day at 37°C in an aerobic atmosphere, extracted using a QIAfilter™ Plasmid Midi Kit (QIAGEN® 12248) and vialled in Tris buffer (10 mM Tris-HCl, pH 8.0).

Lot: 70031271

Manufacturing Date: 29JAN2020

TEST	SPECIFICATIONS	RESULTS
Next-Generation DNA Sequencing MRA-179 18S rRNA gene pCR2.1-TOPO (Invitrogen®)	~ 5050 base pairs ~ 1100 base pairs ~ 3930 base pairs	5122 base pairs ¹ (Figures 1 and 2) 1114 base pairs 4008 base pairs ¹
Genotypic Analysis Sequencing of 18S ribosomal RNA gene (~ 1110 base pairs)	≥ 99% sequence identity to <i>P. malariae</i> 18S rRNA gene (GenBank: AF145336)	100% sequence identity to <i>P. malariae</i> 18S rRNA gene (GenBank: AF145336)
Concentration by PicoGreen® Measurement	Report results	0.2 µg in 20 µL per vial (10 µg/mL)
Amount per Vial	Report results	0.2 µg per vial
OD₂₆₀/OD₂₈₀ Ratio	1.7 to 2.1	1.9

¹Sequencing of MRA-179 lot 70031271 identified a 77 base pair insertion compared to MRA-179 lot 2165. The insertion is located in the pBR322 origin of replication (positions 3371 to 3447); however, the insertion should not affect plasmid function.

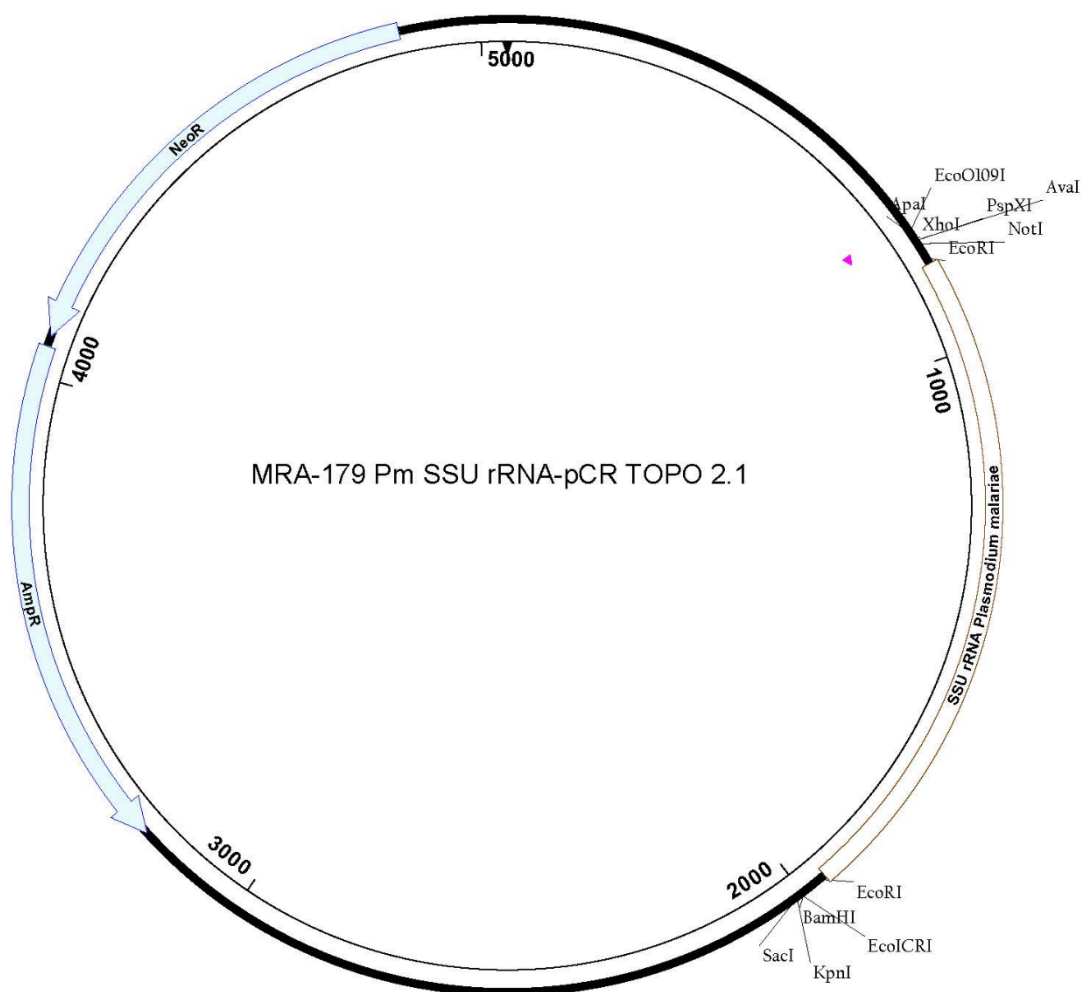
Figure 1: Complete Plasmid Sequence of MRA-179

>MRA-179 lot 70031271 complete plasmid sequence (red text is 18S rRNA gene sequence)

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Figure 2: Plasmid Map of MRA-179



/Heather Couch/
Heather Couch

Program Manager or designee, ATCC Federal Solutions

29 JUL 2020

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