

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

**Catalog No. MRA-177**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

The small subunit ribosomal RNA gene (18S rRNA gene; GenBank: AF145334) from *Plasmodium falciparum* was amplified from genomic DNA by nest 1 PCR primers and cloned into vector pCR2.1-TOPO (Invitrogen®).<sup>1,2</sup> The resulting plasmid (clone 8) may be used in PCR assays for the diagnosis of mixed species malaria infections.<sup>1</sup> MRA-177 was produced in One Shot® TOP10 chemically competent *Escherichia coli* (Invitrogen™) and extracted using a QIAGEN® QIAprep® Spin Miniprep Kit.

The resulting size of the plasmid is approximately 5100 base pairs and contains the genes required for ampicillin and kanamycin resistance. The plasmid map and the complete plasmid sequence are provided on the Certificate of Analysis.

**Material Provided:**

Each vial of MRA-177 contains approximately 500 ng of plasmid DNA in TE buffer (10 mM Tris-HCl and 0.5 mM EDTA, pH 9). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

**Packaging/Storage:**

MRA-177 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Diagnostic Plasmid Containing the Small Subunit Ribosomal RNA Gene (18S) from *Plasmodium falciparum*, MRA-177, contributed by Peter A. Zimmerman.”

**Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed.

Washington, DC: U.S. Government Printing Office, 2009; see [www.cdc.gov/biosafety/publications/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Mehlotra, R. K., et al. “Random Distribution of Mixed Species Malaria Infections in Papua New Guinea.” Am. J. Trop. Med. Hyg. 62 (2000): 225-231. PubMed: 10813477.
2. Zimmerman, P. A., Personal Communication.

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