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

Catalog No. MRA-180

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:
The small subunit ribosomal RNA gene (18S rRNA gene; GenBank: AF145337) from *Plasmodium ovale (P. ovale)*, strain Nigerian I was amplified from genomic DNA by nest 1 PCR primers and cloned into vector pCR2.1-TOPO (Invitrogen™). MRA-180 contains the beta-lactamase gene, *bla*, to provide transformant selection through ampicillin and the kanamycin gene, *aph*, to provide transformant selection through kanamycin resistance in *Escherichia coli (E. coli)*. The resulting size of the plasmid is approximately 5000 base pairs. The complete plasmid sequence and map are provided on the Certificate of Analysis. The plasmid was produced in *E. coli* and extracted.

MRA-180 (clone 54) may be used in PCR assays for the diagnosis of mixed species malaria infections.[1,2]

Material Provided:
Each vial of MRA-180 contains plasmid DNA in buffer. The amount and concentration are shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:
MRA-180 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 ovale*, MRA-180, 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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

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References:
1. Zimmerman, P. A., Personal Communication.
2. 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.
3. Snounou, G., et al. "High Sensitivity of Detection of Human Malaria Parasites by the Use of Nested Polymerase Chain Reaction." Mol. Biochem. Parasitol. 61 (1993): 315-320. PubMed: 8264734.
4. Phuong, M., et al. "Sequence-Based Optimization of a Quantitative Real-Time PCR Assay for Detection of *Plasmodium ovale* and *Plasmodium malariae*." J. Clin. Microbiol. 52 (2014): 1068-1073. PubMed: 24430459.

MR4 Support Provided by NIAID

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