

Plasmid pIH902.MBP.Pfg27, Recombinant in *Escherichia coli*

Catalog No. MRA-1270

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

MRA-1270 is an expression vector encoding *Plasmodium falciparum* (*P. falciparum*), gametocyte-specific protein (Pfg27) on a pIH-902 vector backbone. The 652 base pair Pfg27 gene insert (nucleotide 1 to 651; Gene ID: [813990](#)) was derived from genomic DNA of *in vitro* cultured *P. falciparum*, strain 3D7 parasites.^{1,2} The insert is flanked by sequences encoding N-terminal MBP (maltose binding protein) and C-terminal hexahistidine tag. Isopropyl β-d-1 thiogalactopyranoside (IPTG) stimulates the expression of MBP-Pfg27 protein (BEI Resources MRA-1274), which can be purified on amylose resin.^{1,2} The plasmid size is 6805 base pairs and contains an ampicillin resistance marker. The complete plasmid sequence is provided on the BEI Resources webpage.

Material Provided:

Each vial contains approximately 0.5 mL of pIH902.MBP.Pfg27 transformed *E. coli*, strain DH10B in Luria-Bertani broth supplemented with 10% glycerol.

Packaging/Storage:

MRA-1270 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -80°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Plasmid pIH902.MBP.Pfg27, Recombinant in *Escherichia coli*, MRA-1270, contributed by Kim Williamson.”

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 \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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References:

1. Williamson, K. C., Personal Communication.
2. Kumar Singh, S., et al. “Expression, Purification, Crystallization and Preliminary X-Ray Analysis of the Sexual Stage-Specific Protein Pfg27 from *Plasmodium falciparum*.” *Acta Crystallogr. D. Biol. Crystallogr.* 58 (2002): 1868-1870. PubMed: 12351841.
3. Williamson, K. C., et al. “Recombinant Pfs230, a *Plasmodium falciparum* Gametocyte Protein, Induces Antisera that Reduce the Infectivity of *Plasmodium falciparum* to Mosquitoes.” *Mol. Biochem. Parasitol.* 75 (1995): 33-42. PubMed: 8720173.

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