Plasmodium falciparum Pfg27 Protein with C-Terminal Histidine Tag, Recombinant from *Escherichia coli*

Catalog No. MRA-1274

For research use only. Not for use in humans.

Contributor:
Kim C. Williamson, Ph.D., Professor, Department of Biology, Loyola University Chicago, Chicago, Illinois, USA

Manufacturer:
BEI Resources

Product Description:
A recombinant form of the Pfg27 protein containing an N-terminal maltose binding protein (MBP) and a C-terminal histidine tag was expressed in *Escherichia coli*. The protein was purified using affinity chromatography, and the MBP fragment was removed. MRA-1274 has a theoretical molecular weight of approximately 27 kilodaltons. The predicted protein sequence of MRA-1274 is shown below in Table 1.

Plasmodium falciparum (P. falciparum) gametocyte-specific (Pfg27) protein is expressed early in gametocytes during sexual differentiation.[1,2] Mouse polyclonal antibodies against Pfg27 are specific for stage I to V gametocytes of *P. falciparum*.[1]

Material Provided:
Each vial contains approximately 250 µg of purified recombinant Pfg27 protein in 20 mM Tris-HCl (pH 8) with 500 mM NaCl. The concentration, expressed as mg/mL, is shown on the Certificate of Analysis.

Packaging/Storage:
MRA-1274 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -80°C or colder immediately upon arrival.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Plasmodium falciparum* Pfg27 Protein with C-Terminal Histidine Tag, Recombinant from *Escherichia coli*, MRA-1274, contributed by Kim C. 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). Current Edition. Washington, DC: U.S. Government Printing Office.

Disclaimers:
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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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www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

Figure 1: Predicted Protein Sequence

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1     GMSKVQKDSA KPLDKFGNIY DYHYEHETHA PLSPRIRKVG DIEFHACSDY
51    IYLLMTLSKD PEKFNYALKD RVSIRRYVRK NQNRYNYFLI EERVQDNIVN
101   RISDRLISYC TDKEVTEDYI KKIDDYLWVE QRVIEEVSIN VDHAREVKEK
151   KRIMNDKKLI RMLFDTYEYV KDVKFTDDQY KDAAARISQF LIDVVDSYII
201   KPIPALPVTP DEPHHNNIVD HHHHHH
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Plasmid-derived amino acids – Residues 1, 219, 220
Pfg27 Protein – Residues 2 to 218 [represents all 217 amino acid residues of the Pfg27 protein from *P. falciparum* 3D7 (GenPept: CAD52156)]
Histidine Tag – Residues 221 to 226

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