# Certificate of Analysis for MRA-671

## *Plasmodium berghei*, Strain ANKA

## Catalog No. MRA-671

## Product Description:

*Plasmodium berghei (P. berghei)*, strain ANKA was isolated in July 1965 from *Anopheles dureni millecampsi* mosquitoes collected in the River Kasapa, Democratic Republic of Congo. MRA-671 was produced by inoculation of BEI Resources seed lot 58284697 into ND4 Swiss Webster mice. Infection was allowed to progress for 4 days. Infected blood was collected by orbital bleeding and used to inoculate ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached > 5%. After 4 days, infected blood was collected by retro-orbital bleeding.

**Lot: 70062921** **Manufacturing Date: 22AUG2023**

| TEST | SPECIFICATIONS | RESULTS |
|---|---|---|
| **Genotypic Analysis**[1]<br>Sequencing Circumsporozoite Surface Protein 1 (CSP1) gene (~ 1280 base pairs) | ≥ 99% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2) | 99.6% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2) (Figure 1) |
| **Functional Activity by PCR Amplification**[1]<br>CSP1 PCR amplicon analysis | ~ 900 to 1100 base pair amplicon | ~ 1100 base pair amplicon |
| **Level of Parasitemia**<br>Pre-freeze (4 days post-infection)[2]<br>Post-freeze (4 days post-infection)[1] | <br>≥ 2%<br>≥ 1% | <br>7.58%<br>5.59% |
| **Viability (4 days post-infection)**[1] | Growth in inoculated mice | Growth in inoculated mice |

[1]Testing completed on vialed, post-freeze material
[2]Testing completed on bulk material prior to vialing and freezing

### Figure 1: MRA-671 CSP1 Sequence

GTGTACCATTTTAGTTGTAGCGTCACTTTTATTAGTTAATTCTCTACTTCCAGGATATGGACAAAATAAAAGCATCCAAGCCCAAAGGAACTTAAAC
GAGCTATGTTACAATGAAGGAAATGATAATAAATTGTATCACGTGCTTAACTCTAAGAATGGAAAAATATACAATCGAAATACAGTCAACAGATTAC
TTGCCGATGCTCCCGAAGGAAAAAAAAAATGAGAAAAAAAAACGAAAAAATAGAGCGTAATAATAAATTGAAACAACCACCACCACCACCAAACCCAAA
TGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACSCAAAT
GACCCACCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCACCACCACCAAACGCAAATGACCCACCACCACCAAACGCAAATG
ACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACSCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACSCAAATGA
CCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGAC
CCACCACCACCAAACGCAAATGACCCACCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACC
CAGCACCACCAAACGCAAATGACCCACCACCACCAAACCCAAATGACCCAGCACCACCAAACGCAAATGACCCACCACCACCAAACCCAAATGACCC
AGCACCACCACAAGGAAATAACAATCCACAACCACAGCCACGGCCGCAGCCACAACCACAGCCACAGCCACAACCACAGCCACAGCCACAACCACAG
CCACGACCACAGCCACAACCACAGCCAGGTGGTAATAACAATAACAAAAATAATAATAATGACGATTCTTATATCCCAAGCGCGGAAAAAATACTAG
AATTTGTTAAACAGATCAGGGATAGTATCACAGAGGAATGGTCTCAATGTAACGTAACATGTGGTTCTGGTATAAGAGTTAGAAAACGAAAAGGTTC
AAATAAGAAAGCAGAAGATTTGACCTTAGAAGATATTGATACTGAAATTTGTAAAATGGATAAATGTTCAAGTATATTTAATATTGTAAGCAATTCA
TTAGGATTTGTAATATTA

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/Sonia Bjorum Brower/
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Technical Manager or designee, ATCC Federal Solutions

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