b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for MRA-311

Plasmodium berghei, Strain ANKA

Catalog No. MRA-311

This reagent is the tangible property of the U.S. Government.

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-311 was produced by inoculation of MR-MRA-311 lot 61271752 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 5 days, infected blood was collected by orbital bleeding.

Lot: 70032023 **Manufacturing Date: 29JAN2020**

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis[1] Sequencing Circumsporozoite Surface Protein 1 (CSP1) gene (~ 820 base pairs)	≥ 99% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2)	99.8% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2) (Figure 1)
Functional Activity by PCR Amplification[1] CSP1 PCR amplicon analysis	~ 900-1100 base pair amplicon	~ 1100 base pair amplicon
Level of Parasitemia Pre-freeze (5 days post-infection)[2] Post-freeze (5 days post-infection)[1]	 Report results ≥ 1%	 7.18% 5.35%
Viability (5 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-311 CSP1 Sequence

ACAGTCAACA GATTACTTGC CGATGCTCCC GAAGGAAAAA AAAATGAGAA AAAAAACGAA AAAATAGAGC GTAATAATAA
ATTGAAACAA CCACCACCAC CACCAAACCC AAATGACCCA CCACCACCAA ACCCAAATGA CCCACCACCA CCAAACCCAA
ATGACCCACC ACCACCAAAC CCAAATGACC CACCACCACC AAACGCAAAT GACCCACCAC CACCAAACGC AAATGACCCA
CCACCACCAA ACGCAAATGA CCCACCACCA CCAAACGCAA ATGACCCAGC ACCACCAAAC GCAAATGACC CAGCACCACC
AAACGCAAAT GACCCACCAC CACCAAACCC AAATGACCCA GCACCACCAA ACGCAAATGA CCCACCACCA CCAAACCCAA
ATGACCCAGC ACCACCACAA GGAAATAACA ATCCACAACC ACAGCCACGG CCGCAGCCAC AACCACAGCC ACAGCCACAA
CCACAGCCAC AGCCACAACC ACAGCCACGA CCACAGCCAC AACCACAGCC AGGTGGTAAT AACAATAACA AAAATAATAA
TAATGACGAT TCTTATATCC CAAGCGCGGA AAAAATACTA GAATTTGTTA AACAGATCAG GGATAGTATC ACAGAGGAAT
GGTCTCAATG TAACGTAACA TGTGGTTCTG GTATAAGAGT TAGAAAACGA AAAGGTTCAA ATAAGAAAGC AGAAGATTTG
ACCTTAGAAG ATATTGATAC TGAAATTTGT AAAATGGATA AATGTTCAAG TATATTTAAT ATTGTAAGCA ATTCATTAGG
ATTTGTAATA TTATTAGTAT TAGTA

/Heather Couch/
Heather Couch 20 AUG 2020
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