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 cultivation of BEI Resources seed lot 6121752 into ND4 Swiss Webster mice. Infection was allowed to progress for 6 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 orbital bleeding.

Lot: 70053229 **Manufacturing Date: 12SEP2022**

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TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis[1] Sequencing Circumsporozoite Surface Protein 1 (CSP1) gene (~ 1020 base pairs)	≥ 99% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2)	99.5% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119.2) (Figure 1)
Level of Parasitemia Pre-freeze (4 days post-infection)[2] Post-freeze (4 days post-infection)[1]	 Report results ≥ 1%	 5.41% 2.23%
Viability (4 days post-infection)[1]	Growth in inoculated mice	Growth in inoculated mice

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

Figure 1: MRA-311 MSP2 Sequence

AAATGARGAAGTGTACCATTTTAGTTGTAGCGTCACTTTTATTAGTTAATTCTCTACTTCCAGGATATGGAC
AAAATAAAAGCATCCAAGCCCAAAGGAACTTAAACGAGCTATGTTACAATGAAGGAAATGATAATAAATTGT
ATCACGTGCTTAACTCTAAGAATGGAAAAATATACAATCGAAATACAGTCAACAGATTACYTGCCGATGCTC
CCGAAGGRAAAAAAAATGAGAAAAAAAACGAAAAAATAGAGCGTAATAATAAATTGAAACAACCACCACCAC
CACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCAC
CACCAAACCCAAATGACCCACCACCACCAAACGCAAATGACCCACCACCACCAAACGCAAATGACCCAGCAC
CACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCAGCAC
CACCAAACGCAAATGACCCASCACCACCAAACSCAAATGACCCAGCACCACCAAACGCAAATGACCCACCAC
CACCAAACCCAAATGACCCAGCACCACCACAAGGAAATAACAATCCACAACCACAGCCACGGCCGCAGCCAC
AACCACAGCCACAGCCACAACCACAGCCACAGCCACAACCACAGCCACGACCACAGCCACAACCACAGCCAG
GTGGTAATAACAATAACAAAAATAATAATAATGACGATTCTTATATCCCAAGCGCGGAAAAAATACTAGAAT
TTGTTAAACAGATCAGGGATAGTATCACAGAGGAATGGTCTCAATGTAACGTAACATGTGGTTCTGGTATAA
GAGTTAGAAAACGAAAAGGTTCAAATAAGAAAGCAGAAGATTTGACCTTAGAAGATATTGATACTGAAATTT
GTAAAATGGATAAATGTTCAAGTATATTTAATATTGTAAGCAATTCATTAGGATTTGTAATATTATTAGTAT
TAGTATTCTTTAATTAAANNAAC

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/Sonia Bjorum Brower/
Sonia Bjorum Brower 09 OCT 2023
Technical Manager or designee, ATCC Federal Solutions

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