Certificate of Analysis for MRA-868

Plasmodium berghei, Strain (ANKA) 676m1cl1

Catalog No. MRA-868

Product Description:

Plasmodium berghei (*P. berghei*), strain (ANKA) 676m1cl1 is a genetically modified parasite derived from strain ANKA cl15cy1 following stable transfection with the pL1063 vector (BEI Resources MRA-852) containing the fusion gene of the green fluorescent protein (GFP) and luciferase. MRA-868 expresses GFP-luciferase constitutively during the whole life cycle of the parasite and does not contain a drug-selectable marker. MRA-868 was produced by inoculation of BEI Resources seed lot 59569705 into 2 Swiss Webster ND4 mice. Infection was allowed to progress for 7 days. Infected blood was collected by retro-orbital bleeding and used to inoculate 19 Swiss Webster ND4 mice. Infection was allowed to progress for 4 days. Infected blood was collected by retro-orbital bleeding.

Lot: 70041755 **Manufacturing Date: 09APR2021**

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis[1]		
Circumsporozoite Surface Protein 1 (CSP1) gene PCR amplicon analysis	~ 1100 to 1300 base pair amplicon	~ 1250 base pair amplicon
Sequencing of CSP1 gene (~ 1030 base pairs)	≥ 95% sequence identity to *P. berghei,* strain ANKA (GenBank: LK023119.2)	99% sequence identity to *P. berghei,* strain ANKA (GenBank: LK023119.2) (Figure 1)
Level of Parasitemia		
Pre-freeze (9 days post-infection)[2]	Report results	7.83%
Post-freeze (4 days post-infection)[1]	≥ 1%	2.97%
Viability (post-freeze; 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-868 CSP1 Sequence

AAATGARGAA GTGTACCATT TTAGTTGTAG CGTCACTTTT ATTAGTTAAT TCTCTACTTC CAGGATATGG ACAAAATAAA
AGCATCCAAG CCCAAAGGAA CTTAAACGAG CTATGTTACA ATGAAGGAAA TGATAATAAA TTGTATCACG TGCTTAACTC
TAAGAATGGA AAAATATACA ATCGAAATAC AGTCAACAGA TTAYTGCCGA TGCTCCGAAG RAAAAAAAAT GAGAAAAAAA
ACGAAAAAAT AGAGCGTAAT AATAAATTGA AACAACCACC ACCACCACCA AACCCAAATG ACCCACCACC ACCAAACCCA
AATGACCCAC CACCACCAAA CCCAAATGAC CCACCACCAC CAAACCCAAA TGACCCACCA CCACCAAACG CAAATGACCC
ACCACCACCA AACGCAAATG ACCCAGCACC ACCAAACGCA AATGACCCAG CACCACCAAA CGCAAATGAC CCAGCACCAC
CAAACGCAAA TGACCCAGCA CCACCAAACG CAAATGACCC ASCACCACCA AACSCAAATG ACCCAGCACC ACCAAACGCA
AATGACCCAC CACCACCAAA CCCAAATGAC CCAGCACCAC CACAAGGAAA TAACAATCCA CAACCACAGC CACGGCCGCA
GCCACAACCA CAGCCACAGC CACAACCACA GCCACAGCCA CAACCACAGC CACGACCACA GCCACAACCA CAGCCAGGTG
GTAATAACAA TAACAAAAAT AATAATAATG ACGATTCTTA TATCCCAAGC GCGGAAAAAA TACTAGAATT TGTTAAACAG
ATCAGGGATA GTATCACAGA GGAATGGTCT CAATGTAACG TAACATGTGG TTCTGGTATA AGAGTTAGAA AACGAAAAGG
TTCAAATAAG AAAGCAGAAG ATTTGACCTT AGAAGATATT GATACTGAAA TTTGTAAAAT GGATAAATGT TCAAGTATAT
TTAATATTGT AAGCAATTCA TTAGGATTTG TAATATTATT AGTATTAGTA TTCTTTAATT AAAKAA

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/Sonia Bjorum Brower/
Sonia Bjorum Brower 08 SEP 2022
Technical Manager or designee, ATCC Federal Solutions

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