Certificate of Analysis for MRA-865

Plasmodium berghei, Strain (ANKA) GFP$_{CON}$ 259cl2

Catalog No. MRA-865

Product Description:

Plasmodium berghei (P. berghei), strain (ANKA) GFP$_{CON}$ 259cl2 is a genetically modified parasite derived from strain ANKA cl15cy1 constructed using a pL0016 vector (available as BEI Resources Catalog No. MRA-785) containing the green fluorescent protein (GFP) gene. MRA-865 expresses GFP constitutively during the whole life cycle of the parasite. MRA-865 was produced by inoculation of BEI Resources seed lot 58319585 into three ND4 Swiss Webster mice. Infection was allowed to progress for 7 days. Infected blood was collected by orbital bleeding and used to inoculate three ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached 7%. Infected blood was collected by retro-orbital bleeding.

Lot: 70075199 **Manufacturing Date: 22ARP2022**

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis[1] Sequencing Circumsporozoite Surface Protein 1 (CSP1) gene (~ 1023 base pairs)	≥ 95% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119)	99.9% sequence identity to *P. berghei*, strain ANKA (GenBank: LK023119) (Figure 1)
Functional Activity by PCR Amplification[1] CSP1 PCR amplicon analysis	~ 900-1100 base pair amplicon	~ 1000 base pair amplicon
Phenotypic Analysis GFP expression	Positive	Positive
Level of Parasitemia Pre-freeze (5 days post-infection)[2] Post-freeze (6 days post-infection)[1]	 ≥ 2% ≥ 1%	 7.18% 8.32%
Viability (6 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-865 CSP1 Sequence

ATGARGAAGTGTACCATTTTAGTTGTAGCGTCACTTTTATTAGTTAATTCTCTACTTCCAGGATATGGACAAAATAAAAGCATCCAAGCCCAAAGGA
ACTTAAACGAGCTATGTTACAATGAAGGAAATGATAATAAATTGTATCACGTGCTTAACTCTAAGAATGGAAAAATATACAATCGAAATACAGTCAA
CAGATTACTTGCCGATGCTCCCGAAGGAAAAAAAAAATGAGAAAAAAAACGAAAAAATAGAGCGTAATAATAAATTGAAACAACCACCACCACCACCA
AACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAAACCCAAATGACCCACCACCACCAA
ACGCAAATGACCCACCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCAGCACCACCAAACGCAAATGACCCAGCACCACCAAA
CGCAAATGACCCAGCACCACCAAACGCAAATGACCCACCACCACCAAACCCAAATGACCCAGCACCACCAAACGCAAATGACCCACCACCACCAAAC
CCAAATGACCCAGCACCACCACAAGGAAATAACAATCCACAACCACAGCCACGGCCGCAGCCACAACCACAGCCACAGCCACAACCACAGCCACAGC
CACAACCACAGCCACGACCACAGCCACAACCACAGCCAGGTGGTAATAACAATAACAAAAATAATAATAATGACGATTCTTATATCCCAAGCGCGGA
AAAAATACTAGAATTTGTTAAACAGATCAGGGATAGTATCACAGAGGAATGGTCTCAATGTAACGTAACATGTGGTTCTGGTATAAGAGTTAGAAAA
CGAAAAGGTTCAAATAAGAAAGCAGAAGATTTGACCTTAGAAGATATTGATACTGAAATTTGTAAAATGGATAAATGTTCAAGTATATTTAATATTG
TAAGCAATTCATTAGGATTTGTAATATTATTAGTATTAGTATTCTTTAATTAA

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/Sonia Bjorum Brower/
Sonia Bjorum Brower 12 MAR 2026
Technical Manager or designee, ATCC Federal Solutions

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