

***Plasmodium berghei*, Strain (ANKA) GFP<sub>CON</sub> 259c12**

**Catalog No. MRA-865**

**Product Description:**

*Plasmodium berghei* (*P. berghei*), strain (ANKA) GFP<sub>CON</sub> 259c12 is a genetically modified parasite derived from strain ANKA cl15cy1 following stable transfection with the pL0016 vector (BEI Resources 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 3 ND4 Swiss Webster mice. Infection was allowed to progress for 7 days. Infected blood was collected by orbital bleeding and used to inoculate 24 ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached > 5%. After 6 days, infected blood was collected by orbital bleeding.

**Lot: 70041146**

**Manufacturing Date: 20JAN2021**

TEST	SPECIFICATIONS	RESULTS
<b>Genotypic Analysis<sup>1</sup></b> Sequencing Circumsporozoite Surface Protein 1 (CSP1) gene (~ 640 base pairs)	≥ 95% sequence identity to <i>P. berghei</i> , strain ANKA (GenBank: LK023119)	100% sequence identity to <i>P. berghei</i> , strain ANKA (GenBank: LK023119) (Figure 1)
<b>Functional Activity by PCR Amplification<sup>1</sup></b> CSP1 PCR amplicon analysis	~ 900 to 1100 base pair amplicon	~ 1000 base pair amplicon
<b>Phenotypic Analysis</b> GFP expression <sup>1</sup>	Fluorescence observed	Fluorescence observed (Figure 2)
<b>Level of Parasitemia</b> Pre-freeze (6 days post-infection) <sup>2</sup> Post-freeze (7 days post-infection) <sup>1</sup>	Report results ≥ 1%	5.18% 2.80%
<b>Viability (7 days post-infection)<sup>1</sup></b>	Growth in inoculated mice	Growth in inoculated mice

<sup>1</sup>Testing completed on vial, post-freeze material

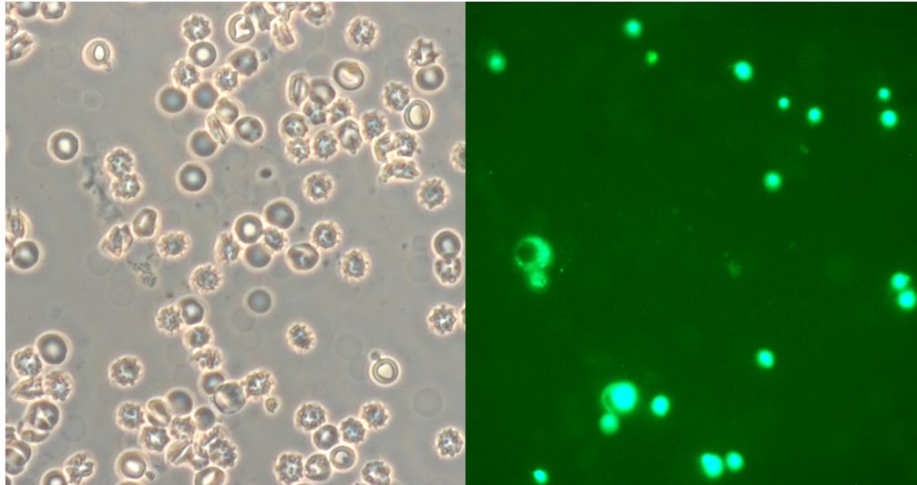
<sup>2</sup>Testing completed on bulk material prior to vialing and freezing

**Figure 1: MRA-865 CSP1 Sequence**

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CCACCACCAC CAAACCCAAA TGACCCACCA CCACCAAACC CAAATGACCC ACCACCACCA AACCCAAATG ACCCACCACC
ACCAAACGCA AATGACCCAC CACCACCAAA CGCAAATGAC CCAGCACCAC CAAACGCAAA TGACCCAGCA CCACCAAACG
CAAATGACCC AGCACCACCA AACGCAAATG ACCCAGCACC ACCAAACGCA AATGACCCAC CACCACCAAA CCCAAATGAC
CCAGCACCAC CAAACGCAAA TGACCCACCA CCACCAAACC CAAATGACCC AGCACCACCA CAAGGAAATA ACAATCCACA
ACCACAGCCA CGGCCGCGAGC CACAACCACA GCCACAGCCA CAACCACAGC CACAGCCACA ACCACAGCCA CGACCACAGC
CACAACCACA GCCAGGTGGT AATAACAATA ACAAAAATAA TAATAATGAC GATTCTTATA TCCAAGCGC GGAAAAATA
CTAGAATTTG TTAAACAGAT CAGGGATAGT ATCAGAGAGG AATGGTCTCA ATGTAACGTA ACATGTGGTT CTGGTATAAG
AGTTAGAAAA CGAAAAGGTT CAAATAAGAA AGCAGAAGAT TTGACCTTAG AAGATATTGA TACTGAAATT TGTAATA
    
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Figure 2: GFP Expression by MRA-865



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Program Manager or designee, ATCC Federal Solutions

20 SEP 2021

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