

***Plasmodium berghei*, Strain NK65 RedStar**

**Catalog No. MRA-905**

**Product Description:** *Plasmodium berghei* (*P. berghei*), strain NK65 RedStar is a clone of *P. berghei*, strain NK65. *P. berghei*, strain NK65 was isolated in April 1964 from *Anopheles durenii millecampsi* mosquitoes collected in the River Kisanga, Democratic Republic of Congo. *P. berghei*, strain NK65 RedStar was deposited as a pyrimethamine-resistant parasite that stably expresses a red fluorescent protein (RFP), RedStar, during sporozoite stages.

**Lot<sup>1</sup>: 63856640**

**Manufacturing Date: 17NOV2015**

TEST	SPECIFICATIONS	RESULTS
<b>Genotypic Analysis</b> Sequencing of Circumsporozoite Surface Protein 1 (CSP1) gene (~ 600 base pairs) CSP1 PCR amplicon analysis <sup>2</sup>	Consistent with <i>P. berghei</i> ~ 900-1100 base pair amplicon	Consistent with <i>P. berghei</i> (Figure 1) ~ 1000 base pair amplicon
<b>Level of Parasitemia</b> Pre-freeze <sup>3</sup> Post-freeze <sup>4</sup>	Report results > 1%	> 5% > 5%
<b>Viability (post-freeze)<sup>5</sup></b>	Growth in inoculated mice	Growth in inoculated mice

<sup>1</sup>MRA-905 was produced by inoculation of MR-MRA-905 lot 58199953 into two ND4 Swiss Webster mice. Infection was allowed to progress for 7 days. Infected blood was collected by orbital bleeding and used to inoculate 12 ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached > 5%. After 5 days, infected blood was collected by orbital bleeding.

<sup>2</sup>Primer sequences and conditions for PCR are available upon request; see, Mauduit, M., et al. "A Role for Immune Responses against Non-CS Components in the Cross-Species Protection Induced by Immunization with Irradiated Malaria Sporozoites." *PLoS One* 4 (2009): e7717. PubMed: 19890387.

<sup>3</sup>Pre-freeze parasitemia was determined after 5 days post infection by microscopic counts of Giemsa-stained blood smears.

<sup>4</sup>Post-freeze parasitemia was determined after 4 days post infection by microscopic counts of Giemsa-stained blood smears.

<sup>5</sup>Viability was confirmed by examination of two Swiss Webster mice for parasitemia at 4 days post infection.

**Figure 1: MRA-905 CSP1 Sequence**

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ATTTATCCAT TTTACAAATT TCAGTATCAA TATCTTCTAA GGTCAAATCT TCTGCTTTCT TATTTGAACC TTTTCGTTTT
CTAACTCTTA TACCAGAACC ACATGTTACG TTACATTGAG ACCATTCCCTC TGTGATACTA TCCCTGATCT GTTTAACAAA
TTCTAGTATT TTTTCCGCGC TTGGGATATA AGAATCGTCA TTATTATTAT TTTTGTTATT GTTATTACCA CCTGGCTGTG
GTTGTGGCTG TGGTCGTGGC TGTGGTTGTG GCTGTGGCTG TGGTTGTGGC TGTGGCTGTG GTTGTGGCTG CGGCCGTGGC
TGTGGTTGTG GATTGTTATT TCCTTGTGGT GGTGCTGGGT CATTTGGGTT TGGTGGTGGT GGGTCATTTG CGTTTGGTGG
TGCTGGGTCA TTTGCGTTTG GTGGTGCTGG GTCATTTGCG TTTGGTGGTG CTGGGTCATT TGCGTTTGGT GGTGCTGGGT
CATTTGCGTT TGGTGGTGCT GGGTCATTTG CGTTTGGTGG TGGTGGGTCA TTTGGGTTTG GTGGTGGTGG GTCATTTGGG
TTTGGTGGTG GTGGGTCATT TGGGTTTGGT GGTGGTGGGT C
    
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**Date:** 07 JUL 2016

**Signature:**



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