

Plasmodium berghei, Strain NK65

Catalog No. MRA-268

Product Description:

Plasmodium berghei (*P. berghei*), strain NK65 was isolated in April 1964 from *Anopheles durenii millecampsi* mosquitoes collected in the River Kisanga, Democratic Republic of Congo.

Lot: 70022464¹

Manufacturing Date: 22FEB2019

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis² Sequencing of Circumsporozoite Surface Protein 1 (CSP1) gene (~ 1020 base pairs)	Consistent with <i>P. berghei</i>	Consistent with <i>P. berghei</i> (Figure 1) ³
Functional Activity by PCR Amplification² CSP1 PCR amplicon analysis ⁴	~ 900 to 1100 base pair amplicon	~ 900 base pair amplicon
Level of Parasitemia Pre-freeze ^{5,6} Post-freeze ^{2,7}	Report results ≥ 1%	13.9% 4.71%
Viability (post-freeze)⁷	Growth in inoculated mice	Growth in inoculated mice

¹MRA-268 was produced by inoculation of BEI Resources MR-MRA-268 lot 58006873 into 3 SW ND4 mice. The infection was allowed to progress for 3 days until parasitemia reached 1.7%. Infected blood was collected and used to inoculate 17 SW ND4 mice. The infection was allowed to progress until parasitemia reached ≥ 10%. After 7 days, infected blood was collected to produce this lot.

²Testing completed on vial, post-freeze material

³Next-generation sequencing assembled using *P. berghei* (clone 236L) CSP gene, complete cds (GenBank: M28887.1) as the reference sequence.

⁴For primer sequences and conditions for PCR refer to 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.

⁵Testing completed on bulk material prior to vialing and freezing

⁶Parasitemia was determined after 7 days of infection by microscopic count of Giemsa-stained pooled blood smears.

⁷Viability was confirmed by examination of 2 SW ND4 mice for parasitemia at 4 days post infection.

Figure 1: MRA-268 CSP1 Sequence

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GAAGTGTACC ATTTTAGTTG TAGCGTCACT TTTATTAGTT AATTCTCTAC TTCCAGGATA TGGACAAAAT AAAAGCATCC
AAGCCCAAAG GAACTTAAAC GAGCTATGTT ACAATGAAGG AAATGATAAT AAATTGTATC ACGTGCTTAA CTCTAAGAAT
GGAAAAATAT ACAATCGAAA TACAGTCAAC AGATTACTTG CCGATGCTCC CGAAGGAAAA AAAAATGAGA AAAAAAACGA
AAAAATAGAG CGTAATAATA AATTGAAACA ACCACCACCA CCACCAAACC CAAATGACCC ACCACCACCA AACCCAAATG
ACCCACCACC ACCAAACCCA AATGACCCAC CACCACCAAA CCCAAATGAC CCACCACCAC CAAACGCAAA TGACCCACCA
CCACCAAACG CAAATGACCC AGCACCACCA AACGCAAATG ACCCAGCACC ACCAAACGCA AATGACCCAG CACCACCAAA
CGCAAATGAC CCAGCACCAC CAAACGCAAA TGACCCAGCA CCACCAAACG CAAATGACCC AGCACCACCA AACGCAAATG
ACCCACCACC ACCAAACCCA AATGACCCAG CACCACCACA AGGAAATAAC AATCCACAAC CACAGCCACG GCCGCAGCCA
CAACCACAGC CACAGCCACA ACCACAGCCA CAGCCACAAC CACAGCCACG ACCACAGCCA CAACCACAGC CAGGTGGTAA
TAACAATAAC AAAAATAATA ATAATGACGA TTCTTATATC CCAAGCGCGG AAAAAATACT AGAATTTGTT AAACAGATCA
GGGATAGTAT CACAGAGGAA TGGTCTCAAT GTAACGTAAC ATGTGGTTCT GGTATAAGAG TTAGAAAACG AAAAGGTTCA
AATAAGAAAAG CAGAAGATTT GACCTTAGAA GATATTGATA CTGAAATTTG TAAAATGGAT AAATGTTCAA GTATATTTAA
TATTGTAAGC AATTCATTAG GATTTGTAAT ATTATTAGTA TTAGTATTCT TTAATTTAAA
    
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16 JAN 2020

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