

**Plasmodium berghei, Strain pv25DR (15cy1Pb25-/PD28-)**

**Catalog No. MRA-904**

**Product Description:**

*Plasmodium berghei* (*P. berghei*), strain pv25DR is a transgenic clone (29E), of the wild-type *P. berghei* clone 15cy1(hp), created by double knockout of endogenous *pb25* and *pb28* genes and replacement with the *pv25* gene from *P. vivax*.

**Lot: 70019944<sup>1</sup>**

**Manufacturing Date: 13NOV2018**

TEST	SPECIFICATIONS	RESULTS
<b>Genotypic Analysis<sup>2</sup></b> Sequencing of Circumsporozoite Surface Protein 1 (CSP1) gene (~ 980 base pairs)	Consistent with <i>P. berghei</i>	Consistent with <i>P. berghei</i> (Figure 1)
<b>Functional Activity by PCR Amplification<sup>2</sup></b> CSP1 PCR amplicon analysis <sup>3</sup>	~ 900 to 1100 base pair amplicon	~ 900 base pair amplicon
<b>Level of Parasitemia</b> Pre-freeze <sup>4,5</sup> Post-freeze <sup>2,6</sup>	Report results ≥ 1%	11.7% 3.51%
<b>Viability (post-freeze)<sup>2,7</sup></b>	Growth in inoculated mice	Growth in inoculated mice

<sup>1</sup>MRA-904 was produced by inoculation of BEI Resources MR-MRA-904 lot 58058576 into 3 SW ND4 mice. The infection was allowed to progress for 6 days until parasitemia reached ≥ 7%. Infected blood was collected and used to inoculate 17 SW ND4 mice. The infection was allowed to progress until parasitemia reached ≥ 7%. After 6 days, infected blood was collected to produce this lot.

<sup>2</sup>Testing completed on vial, post-freeze material

<sup>3</sup>For 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.

<sup>4</sup>Testing completed on bulk material prior to vialing and freezing

<sup>5</sup>Parasitemia was determined after 6 days of infection by microscopic count of a Giemsa-stained pooled blood smear.

<sup>6</sup>Parasitemia was determined after 4 days of infection by microscopic count of Giemsa-stained blood smears.

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

**Figure 1: MRA-904 CSP1 Sequence**

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TAAAGAATAC TAATACTAAT AATATTACAA ATCCTAATGA ATTGCTTACA ATATTAAATA TACTTGAACA TTTATCCATT
TTACAAATTT CAGTATCAAT ATCTTCTAAG GTCAAACTCT CTGCTTTCTT ATTTGAACCT TTTTCGTTTTT TAACCTTTAT
ACCAGAACCA CATGTTACGT TACATTGAGA CCATTCCCTCT GTGATACTAT CCCTGATCTG TTTAAACAAAT TCTAGTATTT
TTTCCGCGCT TGGGATATAA GAATCGTCAT TATTATTATT TTTGTTATTG TTATTACCAC CTGGCTGTGG TTGTGGCTGT
GGTCGTGGCT GTGGTTGTGG CTGTGGCTGT GGTGTGTGGCT GTGGCTGTGG TTGTGGCTGC GGCCGTGGCT GTGGTTGTGG
ATTGTTATTT CCTTGTGGTG GTGCTGGGTC ATTTGGGTTT GGTGGTGGTG GGTCAATTTGC GTTTGGTGGT GCTGGGTCAT
TTGGGTTTGG TGGTGGTGGG TCATTTGCGT TTGGTGGTGC TGGGTCATTT GCGTTTGGTG GTGCTGGGTC ATTTGCGTTT
GGTGGTGCTG GGTCAATTTGC GTTTGGTGGT GCTGGGTCAT TTGCGTTTGG TGGTGGTGGG TCATTTGCGT TTGGTGGTGG
TGGGTCATTT GGGTTTGGTG GTGGTGGGTC ATTTGGGTTT GGTGGTGGTG GGTCAATTTGG GTTTGGTGGT GGTGGGTCAT
TTGGGTTTGG TGGAGGTGGT GGTTGTTTCA ATTTATTAAA AAACCTCTATT TTTTGTATT TTTATCATGT TTATTTCTTT
AGGGAGGGTC TCCAAGTAAT CTATCATGTG TTTCTGGTGT AATATTATAA ACCAAAATTC AAAGAATAAA GCACAAGATT
TAACCTTATA ATATATTGAT ACTTAAATTT GTAAAATGGA TAAATGTTCA AGTTCATTTA AGATTGGATG CAATTATTTT
GTCCATATCC TGAAGTAGAG AA
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