

***Plasmodium yoelii* subsp. *yoelii*, Strain 17XNL:PyGFP**

Catalog No. MRA-817

Product Description: *Plasmodium yoelii* (*P. yoelii*) subsp. *yoelii*, strain 17XNL:PyGFP is a 17XNL line that is stably transfected with a vector (pL0016, available as BEI Resources MRA-785) containing the green fluorescent protein (GFP) gene. *P. yoelii* subsp. *yoelii*, strain 17XNL is a non-lethal line of the 17X strain, which was originally isolated by I. Landau from wild-caught thicket rat (*Thamnomys rutilans*) no. 17X, at La Maboké Field Station in Central African Republic, April 1965. *P. yoelii* subsp. *yoelii*, strain 17XNL:PyGFP is a stable line selected with pyrimethamine that constitutively expresses high levels of GFP during the complete life cycle of the parasite.

Lot¹: 2166

Manufacturing Date: 20JAN2017

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis Sequencing of Circumsporozoite Surface Protein 1 (CSP1) gene (~ 630 base pairs) CSP1 PCR amplicon analysis ²	≥ 99% sequence identity to <i>P. yoelii</i> subsp. <i>yoelii</i> , strain 17XNL (GenBank: AABL01000897) ~ 900-1100 base pair amplicon	99.7% sequence identity to <i>P. yoelii</i> subsp. <i>yoelii</i> , strain 17XNL (GenBank: AABL01000897) (Figure 1) ~ 1100 base pair amplicon
Phenotypic Analysis GFP expression ³	Positive	Positive (Figure 2)
Level of Parasitemia Pre-freeze ⁴ Post-freeze ⁵	Report results ≥ 1%	9.06% 2.13%
Viability (post-freeze)⁶	Growth in inoculated mice	Growth in inoculated mice

¹MRA-817 was produced by inoculation of MR-MRA-817 lot 58319583 into three ND4 Swiss Webster mice. Infection was allowed to progress for 7 days until parasitemia reached > 5%. Infected blood was collected by orbital bleeding and used to inoculate 17 ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached > 5%. After 7 days, infected blood was collected by orbital bleeding.

²Primer 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.

³GFP expression was monitored by fluorescence microscopy. Fluorescence was observed in all stages of the erythrocytic life cycle.

⁴Pre-freeze parasitemia was determined after 7 days post infection by microscopic counts of Giemsa-stained blood smears.

⁵Post-freeze parasitemia was determined after 5 days post infection by microscopic counts of Giemsa-stained blood smears.

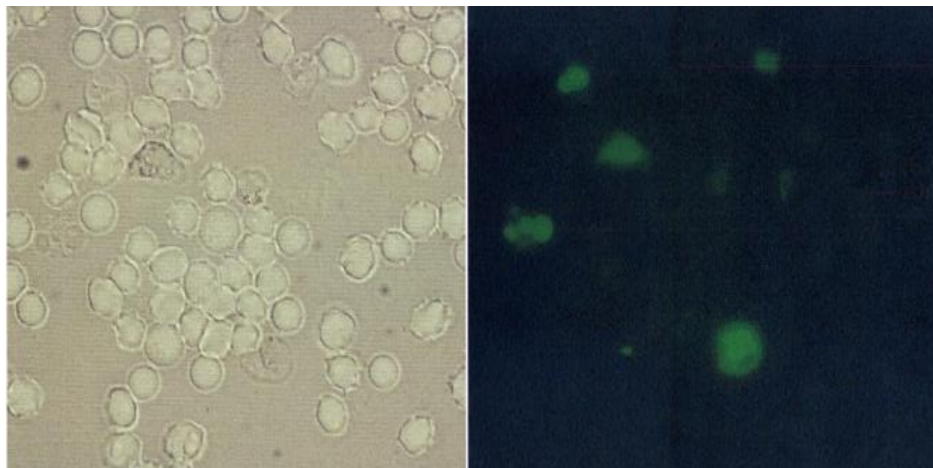
⁶Viability was confirmed by examination of two ND4 Swiss Webster mice for parasitemia at 5 days post infection.

Figure 1: MRA-817 CSP1 Sequence

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TTTATCCATT TTACAAATTT CAGTATCAAT ATCCTCTAAG GTCAAATTTT CTGGTTGCTT GTTTACATTT TTTTCGTTTTTC
TAACTCTTAC ACCARAACCA CAGGTTACAC TACATTGAGA CCATTCCCTCT GTGAGTTGAC TACTTATCTG TTTAACAAAT
TCTAGTATTT GTTCCGCGCT TGGGACATAA GAATCTTCAT TATTATTACC ATTATTATTG TTATTGTTGT TATTACCATC
TGGCTGTGGG CGTGGTTGTT GTGGTGGCTG TTGTGGTGCC TGTTGTGGTG GCTGTTGTGG TGGCTGTTGT GGTGGTTGTT
GGGGTGGTTG TTGGGGTGGT TCTTGTGGTG CTCCTGGCCC TTGTGGTGCT CCTGGCCCCT GTGGTGCTCC TGGTCTTGT
GGTGCTCCTG GTCCTTGTGG TGCTCCTGGC CCCTGTGGTG CTCCTGGTCC TTGTGGTGCT CCTGGACCTT GTGGTGCTCC
TGGACCTGT GGTGCTCCTG GACCTTGTGG TGCTCCTGGT CCTTGTGGWG CTCCTGGTCC TTGTGGTGCT CCTGGACCTT
GTGGTGCTCC TGGTCTTGT GGTGCTCCTG GCCCTTGTGG TGCTCCTGGC CCCTGTGGTG CTCCTG
    
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Figure 2: GFP Expression by MRA-817



Date: 20 JUL 2017

Signature: 

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