Certificate of Analysis for MRA-749

Plasmodium yoelii subsp. *yoelii*, Strain 17X

Catalog No. MRA-749

Product Description: *Plasmodium yoelii* subsp. *yoelii* (*P. yoelii* subsp. *yoelii*), strain 17X was isolated by I. Landau from wild-caught thicket rat (*Thamnomys rutilans*) no. 17X, at La Maboké Field Station in Central African Republic, April 1965.

Lot[1]: 63765296 **Manufacturing Date: 30SEP2015**

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis		
Sequencing of Circumsporozoite Surface Protein 1 (CSP1) gene (~ 1150 base pairs)	≥ 99% sequence identity to *P. yoelii* subsp. *yoelii* (GenBank: XM_723123.1)	99.0% sequence identity to *P. yoelii* subsp. *yoelii* (GenBank: XM_723123.1) (Figure 1)
CSP1 PCR amplicon analysis[2]	~ 900-1100 base pair amplicon	~ 1100 base pair amplicon
Level of Parasitemia		
Pre-freeze[3]	Report results	> 10%
Post-freeze[4]	> 1%	> 5%
Viability (post-freeze)[5]	Growth in inoculated mice	Growth in inoculated mice

[1]MRA-749 was produced by inoculation of MR-MRA-749 lot 58827729 into two ND4 Swiss Webster mice. Infection was allowed to progress for 7 days until parasitemia reached > 10%. Infected blood was collected by orbital bleeding and used to inoculate 15 ND4 Swiss Webster mice. Infection was allowed to progress until parasitemia reached > 10%. After 6 days, infected blood was collected by orbital bleeding.
[2]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.
[3]Pre-freeze parasitemia was determined after 6 days post infection by microscopic counts of Giemsa-stained blood smears.
[4]Post-freeze parasitemia was determined after 3 days post infection by microscopic counts of Giemsa-stained blood smears.
[5]Viability was confirmed by examination of two Swiss Webster mice for parasitemia at 3 days post infection.

Figure 1: MRA-749 CSP1 Sequence

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GTTGATTCTC TACTTCCAGG ATATGGACAA AATAAAAGTG TCCAAGCCCA AAGAAACTTA AACGAGCTAT GTTACAATGA
AGAAAATGAT AATAAATTGT ATCACGTCCT TAACTCGAAG AATGGAAAAA TATACAATCG AAATATAGTC AACAGATTAC
TTGGCGATGC TCTCAACGGA AAACCAGAAG AAAAAAAAGA TGATCCCCCA AAAGATGGCA ACAAAGATGA TCTTCCAAAA
GAAGAAAAAA AAGATGATCT TCCAAAAGAA GAAAAAAAAG ATGATCCCCC AAAAGATCCT AAAAAAGATG ATCCACCAAA
AGAGGCTTAR AATAAATTGA ATCAACCAGT AGTGGTTGAT GAAAATGTTG ATCAAGGGCC AGGAGCACCA CATGGGCGAG
GAGCACCACA AGGGCCAGGA GCACCACAGG GGCCAGGAGC ACCACAGGGG CCAGGAGCAC CACAAGGGCC AGGAGCACCA
CAAGGACCAG GAGCACCACA AGGGCCAGGA GCACCACAAG GGCCAGGAGC ACCACAAGGG CCAGGAGCAC CACAGGGGCC
AGGAGCACCA CAAGGGCCAG GAGCACCACA AGGACCAGGA GCACCACAGG GTCCAGGAGC ACCACAAGGA CCAGGAGCAC
CACAAGGACC AGGAGCACCA CAAGGTCCAG GAGCACCACA GGGTCCAGGA GCACCACAGG GTCCAGGAGC ACCACAAGGA
CCAGGAGCAC CACAGGGGCC AGGAGCACCA CAAGGACCAG GAGCACCACA AGGACCAGGA GCACCACAGG GGCCAGGAGC
ACCACAAGGG CCAGGAGCAC CAYAAGAACC ACCCCAACAA CCACCCCAAC AACCACCACA ACAGCCACCA CAACAGCCAC
CACAACAGCC ACCACAACAG CCACCACAAC AACCACGCCC ACAKCCAGAT GGTAATAACA ACAATAACAA TAATAATGGT
AATAATAATG AAGATTCTTA TGTCCCAWGY GYGGAACAAA TAYTAGAATT TGTTAAACAK ATAAGTAGTC AACTYACAGA
GGAATKGTCT CAATGTAGTG TAACYTGTGG TTYTGGTGTA AGAGTTAGAA AACGAAAAAA TGTAAACAAG CAACCAGAAA
ATTTGACCTT AGAGGATATT GATAYTGAAA TTT
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Date: 05 APR 2016 **Signature:**

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