

Zika Virus, DAK AR 41524

Catalog No. NR-51813

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Flaviviridae, Flavivirus*

Species: Zika Virus

Strain/Isolate: DAK AR 41524

Original Source: Zika virus (ZIKV), DAK AR 41524 was isolated from a mosquito (*Aedes africanus*) in Kédougou, Senegal, on November 17, 1984. The complete genome of ZIKV, DAK AR 41524 has been sequenced (GenBank: [KX601166](#)).

Comments: NR-51813 was produced by one passage of BEI Resources NR-50067 in *Aedes albopictus* (C6/36) insect cells by the contributor and two passages in C6/36 cells at BEI Resources [NR-50067 passage history is A1C1V2; A is *Aedes pseudoscutellaris* (AP61) insect cells, C is C6/36 cells and V is Vero cells]. NR-50067 was not distributed by BEI Resources since a low level of Dezydougou insect virus contamination was detected by whole genome sequencing. Since NR-51813 was passaged in C6/36 insect cells during production, it was sequenced by the contributor (data not provided) and BEI Resources and displayed no alignment against Dezydougou sequence (GenBank: JQ675604). Since Dezydougou virus is known to replicate in mosquito cells, it is recommended that the user confirm the purity of this material.¹

ZIKV is a member of the Spondweni serocomplex of mosquito-borne flaviviruses. ZIKV is vectored primarily by *Aedes* spp., but has also been isolated from *Anopheles*, *Eretmapodites* and *Mansonia* mosquitoes.² Phylogenetic analyses indicated that there are two major lineages of ZIKV, African and Asian.³ A third lineage circulating in West Africa was recently described.⁴

The first human infections with ZIKV were reported in Nigeria in 1954.⁵ Only sporadic infections were seen until 2007, when a large outbreak occurred in Yap State, Federated States of Micronesia.⁶ There was another large outbreak in French Polynesia in 2013, concomitant with a Dengue fever epidemic, and the virus has subsequently spread throughout the South Pacific.^{7,8,9,10,11,12} Autochthonous transmission of ZIKV in Brazil was reported early in 2015, and has since been reported in countries throughout Central America and the Caribbean.^{13,14} It seems likely that the Asian lineage of ZIKV was introduced into Brazil by travelers from one or more Pacific Island countries.¹⁵ The outbreak in the Americas has become the most widespread in history. Updates on areas

with ongoing ZIKV transmission are available online from the Centers for Disease Control and Prevention.¹⁶ An estimated 80% of human ZIKV infections are asymptomatic, and symptomatic disease is generally mild and characterized by fever, maculopapular rash, arthralgia and nonpurulent conjunctivitis. However, ZIKV infections were confirmed in infants with microcephaly, outbreaks in Brazil and elsewhere have been accompanied by a marked increase in the number of children born with microcephaly and sufficient evidence has since accumulated to infer a causative relationship between prenatal ZIKV infection and microcephaly and other severe brain anomalies.^{17,18,19} The full teratogenic potential of ZIKV, the absolute and relative risks among infants exposed to ZIKV *in utero* and factors that may modify these risks remain to be determined.

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Aedes albopictus* clone C6/36 cells infected with ZIKV, DAK AR 41524.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-51813 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Host: *Aedes albopictus* clone C6/36 cells (ATCC® CRL-1660™)

Growth Medium: Eagle's Minimum Essential Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 90% to 95% confluent

Incubation: 6 to 9 days at 28°C and 5% CO₂

Cytopathic Effect: Cell rounding and sloughing; confirmation of infectivity by immunofluorescence is recommended.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Zika Virus, DAK AR 41524, NR-51813."

Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbli5/index.htm.

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