Zika Virus, MR 766

Catalog No. NR-50065

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:** MR 766  
**Original Source:** MR 766 is the prototype strain of Zika virus (ZIKV), and was isolated from the blood of a sentinel rhesus monkey in the Zika forest near Entebbe, Uganda, on April 20, 1947. The complete genomic sequence of ZIKV, MR 766 was previously determined (GenBank: AY632535, DQ859059). The complete coding sequence of NR-50065, Lot No. 63856750 has also been determined (GenBank: KU963573).

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. Phylogenetic analyses indicated that there are two major lineages of ZIKV, African and Asian. A third lineage circulating in West Africa was recently described.

The first human infections with ZIKV were reported in Nigeria in 1954. Only sporadic infections were seen until 2007, when a large outbreak occurred in Yap State, Federated States of Micronesia. 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. Autchthonous transmission of ZIKV in Brazil was reported early in 2015, and has since been reported in countries throughout Central America and the Caribbean. It seems likely that the Asian lineage of ZIKV was introduced into Brazil by travelers from one or more Pacific Island countries. 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.

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. 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 *Cercopithecus aethiops* kidney epithelial cells (Vero; ATCC® CCL-81™) infected with ZIKV, MR 766.

**Packaging/Storage:**  
NR-50065 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:** Vero cells (ATCC® CCL-81™)  
**Growth Medium:** Dulbecco's Modified Eagle's Medium containing 4 mM L-glutamine, 4500 mg per L glucose, 1 mM sodium pyruvate, and 1500 mg per L sodium bicarbonate, supplemented with 2% to 5% fetal bovine serum, or equivalent.  
**Infection:** Cells should be 60% to 95% confluent (not 100%); thaw virus rapidly in a 37°C water bath; adsorb diluted virus to cells for one hour at 37°C.  
**Incubation:** 2 to 8 days at 37°C and 5% CO₂

**Cytotoxic Effect:** Cell rounding and detachment

**Citation:**  
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH, as part of the WRCEVA program: Zika Virus, MR 766, NR-50065.”

**Biosafety Level:** 2  

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**References:**

5. Shabman, R., et al. J. Craig Venter Institute, 9704 Medical Center Drive, Rockville, Maryland 20850, USA. Direct submission.

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