Product Information Sheet for NR-50355

Zika Virus, R103451

Catalog No. NR-50355

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
Virus Classification: *Flaviviridae*, *Flavivirus*
Species: Zika virus
Strain/Isolate: R103451
Original Source: Zika virus (ZIKV), R103451 was isolated on January 6, 2016 from the placenta of a human who had traveled to Honduras in 2015.[1,2] The complete genomic sequence of ZIKV, R103451 has been determined (GenBank: KX262887).[2]

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.[3] Phylogenetic analyses indicated that there are two major lineages of ZIKV, African and Asian.[4] A third lineage circulating in West Africa was recently described.[5]

The first human infections with ZIKV were reported in Nigeria in 1954.[6] Only sporadic infections were seen until 2007, when a large outbreak occurred in Yap State, Federated States of Micronesia.[7] There was another large outbreak in French Polynesia in 2013, concomitant with a Dengue fever epidemic,[8,9] and the virus has subsequently spread throughout the South Pacific.[10-13] Autochthonous transmission of ZIKV in Brazil was reported early in 2015,[14,15] 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.[16] 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.[17] 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,[18,19] outbreaks in Brazil and elsewhere have been accompanied by a marked increase in the number of children born with microcephaly,[20] and sufficient evidence has since accumulated to infer a causative relationship between prenatal ZIKV infection and microcephaly and other severe brain anomalies.[21] 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, R103451.

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

Packaging/Storage:
NR-50355 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: *Cercopithecus aethiops* kidney epithelial cells (Vero; ATCC® CCL-81™)
Growth Medium: Eagle's Minimum Essential Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine and 1 mM sodium pyruvate supplemented with 2% fetal bovine serum, or equivalent
Infection: Cells should be 70% to 90% confluent; thaw virus rapidly in a 37°C water bath; adsorb diluted virus to cells for one hour at 37°C.
Incubation: 5 to 9 days at 37°C and 5% CO_2
Cytopathic Effect: Cell rounding and detachment

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Zika Virus, R103451, NR-50355."

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/bmbl5/index.htm.

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