Zika Virus, H/PAN/2015/CDC-259364

Catalog No. NR-50221

For research use only. Not for human use.

Contributor:
Ann M. Powers, Ph.D., Arboviral Diseases Branch, Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention, Fort Collins, Colorado, USA

Manufacturer:
BEI Resources

Product Description:

**Virion Classification:** Flaviviridae, Flavivirus  
**Species:** Zika virus  
**Strain/Isolate:** H/PAN/2015/CDC-259364  
**Original Source:** Zika virus (ZIKV), H/PAN/2015/CDC-259364 was isolated from a serum specimen collected from a human in Panama on December 18, 2015. The complete genomic sequence of BEI Resources NR-50221, Lot No. 64158298 has been determined (GenBank: KX156776, ZIKV/Homo sapiens/PAN/CDC-259364_V1-V2/2015).  

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, 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 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 76, clone E6; ATCC® CRL-1586™) infected with ZIKV, H/PAN/2015/CDC-259364.

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

**Packaging/Storage:**  
NR-50221 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 76, clone E6; ATCC® CRL-1586™)  
**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 85% confluent; thaw virus rapidly in a 37°C water bath; adsorb diluted virus to cells for one hour at 37°C.  
**Incubation:** 6 to 8 days at 37°C and 5% CO₂  
**Cytopathic Effect:** Cell rounding and detachment

**Citation:**  
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Zika Virus, H/PAN/2015/CDC-259364, NR-50221.”

**Biosafety Level:**  
2  

**Disclaimers:**  
You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The

<table>
<thead>
<tr>
<th>Strain/Isolate</th>
<th>Product Description</th>
<th>Packaging/Storage</th>
<th>Growth Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR-50221</td>
<td>Zika Virus, H/PAN/2015/CDC-259364</td>
<td>Be packaged aseptically in screw-capped plastic cryovials.</td>
<td>Host: Cercopithecus aethiops kidney epithelial cells (Vero 76, clone E6; ATCC® CRL-1586™) 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 85% confluent; thaw virus rapidly in a 37°C water bath; adsorb diluted virus to cells for one hour at 37°C. Incubation: 6 to 8 days at 37°C and 5% CO₂ Cytopathic Effect: Cell rounding and detachment</td>
</tr>
<tr>
<td>NR-50221</td>
<td>Zika Virus, H/PAN/2015/CDC-259364</td>
<td>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.</td>
<td>Host: Cercopithecus aethiops kidney epithelial cells (Vero 76, clone E6; ATCC® CRL-1586™) 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 85% confluent; thaw virus rapidly in a 37°C water bath; adsorb diluted virus to cells for one hour at 37°C. Incubation: 6 to 8 days at 37°C and 5% CO₂ Cytopathic Effect: Cell rounding and detachment</td>
</tr>
</tbody>
</table>

**BEI Resources**  
www.beiresources.org

© 2016/2017 American Type Culture Collection (ATCC). All rights reserved.
Product Information Sheet for NR-50221

MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:
2. Shabman, R., et al. J. Craig Venter Institute, 9704 Medical Center Drive, Rockville, Maryland 20850, USA. Direct submission.
18. CDC. “CDC Health Advisory: Recognizing, Managing, and Reporting Zika Virus Infections in Travelers Returning from Central America, South America, the Caribbean and Mexico.” Atlanta, Georgia: US Department of Health and Human Services, CDC. 2016. http://emergency.cdc.gov/han/han00385.asp

ATCC® is a trademark of the American Type Culture Collection.