Japanese Encephalitis Virus, Okayama *Culex tritaeniorhynchus* (OCT)-541, Line 35-24

Catalog No. NR-9565

(Derived from ATCC® VR-343™)

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Contributor:

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Product Description:

Virus Classification: *Flaviviridae*, *Flavivirus*
Species: Japanese encephalitis virus (JEV)
Strain/Isolate: Okayama *Culex tritaeniorhynchus* (OCT)-541, line 35-24
Original Source: OCT-541, line 35-24 is reported to be an attenuated derivative of OCT-541. It was derived by rapid passage of the parent strain at incubation temperatures between 35 and 24° over 30 passages in hamster kidney cells.[1] The attenuation of this preparation has not been confirmed by BEI Resources. OCT-541 was isolated in 1948 from mosquitoes (*Culex tritaeniorhynchus*) in Japan.[2]
Comments: JEV, OCT-541, line 35-24 was deposited at the ATCC® by Dr. William M. Hammon of the Department of Epidemiology and Microbiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania.

JEV is an arbovirus transmitted in a zoonotic cycle among rice-field mosquitoes of the *Culex* species, with pigs as amplifying hosts and wading birds as intermediate hosts.[3] It is the most important cause of epidemic encephalitis worldwide, with around 50,000 cases and 10,000 deaths per year affecting essentially children below 10 years of age.[4] Approximately half the survivors have severe neurological disabilities. Most cases occur in rural areas of Southeast Asia, but the geographical area affected by JEV is expanding. In the absence of an effective antiviral treatment, prevention constitutes the best defense against this disease. Several vaccines are now available[5–7] and others are under development.[8,9]

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from African green monkey kidney cells (Vero; ATCC® CCL-81™) infected with JEV, OCT-541, line 35-24.

This virus, grown in HaK cells, is available as BEI Resources NR-91.

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

Packaging/Storage:

NR-9565 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: Minimum Essential Medium containing Earle's salts and non-essential amino acids supplemented with 2% irradiated fetal bovine serum, 2 mM L-glutamine and 1 mM sodium pyruvate, or equivalent (lot-specific details are on the Certificate of Analysis)
Infection: Cells should be 80–90% confluent (not 100% confluent)
Incubation: 6 to 9 days at 30°C and 5% CO_2
Cytopathic Effect: Cell rounding and sloughing

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Japanese Encephalitis Virus, Okayama *Culex tritaeniorhynchus* (OCT)-541, Line 35-24, NR-9565."

Biosafety Level: 3

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm. Vaccination is recommended for all laboratory workers with a potential for exposure to infectious JEV.[10]

Disclaimers:

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