Seoul Virus, Tchoupitoulas 401613

Catalog No. NR-9379

For research use only. Not for use in humans.

Contributor:

Chil-Yong Kang, Dr., Department of Microbiology and Immunology, University of Ottawa, Ontario, Canada and Charles H. Calisher, Ph.D., Department of Microbiology, Immunology and Pathology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colorado, USA

Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Hantaviridae*, *Orthohantavirus*
Species: Seoul virus (also referred to as Seoul orthohantavirus)
Strain/Isolate: Tchoupitoulas 401613
Original Source: Seoul virus (SEOV), Tchoupitoulas 401613 was isolated from the pancreas of a brown rat *(Rattus norvegicus)* near the Mississippi River in New Orleans, Louisiana, USA in 1984.[1]
Comments: The complete genome of SEOV, Tchoupitoulas 401613 has been sequenced (GenBank: KU204958, KU204959, KU204960).[2] In order to remove contaminating mycoplasma, the deposited material was passaged three times with mycoplasma removal agent.

Seoul virus (SEOV) is a spherical enveloped RNA virus with a segmented negative-sense, single-stranded RNA genome with S (small), M (medium) and L (large) segments encoding the nucleoprotein, envelope glycoproteins and the L protein or RNA-dependent RNA polymerase, respectively.[3] SEOV is the most widely distributed hantavirus worldwide because of the omnipresence of its rodent hosts: brown rats *(Rattus norvegicus)* and black rats *(Rattus rattus)*.[4,5] Transmission to humans occurs via the inhalation of infectious viral particles shed in the rodent excreta.[5] SEOV belongs to the Old World hantaviruses and mainly targets human kidney causing milder forms of hemorrhagic fever with renal syndrome (HFRS) with infection often associated with the presence of hepatitis.[3,5]

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells infected with SEOV, Tchoupitoulas 401613.

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

Packaging/Storage:

NR-9379 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 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, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent
Infection: Cells should be 70% to 90% confluent
Incubation: 14 days at 37°C and 5% CO_2
Cytopathic Effect: Cell rounding and sloughing may or may not be observed; confirmation of infectivity by RT-PCR is recommended.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Seoul Virus, Tchoupitoulas 401613, NR-9379."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Tsai, T. F., et al. "Serological and Virological Evidence of a Hantaan Virus-Related Enzootic in the United States." J. Infect. Dis. 152 (1985): 126-136. PubMed: 2861241.
2. Miles, R. W., et al. "Complete Genome Sequence of Seoul Virus Strain Tchoupitoulas." Genome Announc. 4 (2016): e00480-16. PubMed: 27284149.
3. Avšič-Županc, T., A. Saksida and M. Korva. "Hantavirus Infections." Clin. Microbiol. Infect. 21S (2015): e6-e16. PubMed: 24750436.
4. Clement, J., et al. "Clinical Characteristics of Ratborne Seoul Hantavirus Disease." Emerg. Infect. Dis. 25 (2019): 387-388. PubMed: 30666956.
5. Clement, J., et al. "Wild Rats, Laboratory Rats, Pet Rats: Global Seoul Hantavirus Disease Revisited." Viruses 11 (2019): 652. PubMed: 31319534.

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E-mail: contact@beiresources.org
Tel: 800-359-7370
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