

Dengue Virus Type 1, UIS 1162

Catalog No. NR-49707

For research use only. Not for use in humans.

Contributor:

World Reference Center for Emerging Viruses and Arboviruses, University of Texas Medical Branch, Galveston, Texas, USA

Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Flaviviridae*, *Flavivirus*

Species: Dengue virus type 1

Strain/Isolate: UIS 1162

Original Source: Dengue virus type 1 (DEN-1), UIS 1162 was isolated from a serum specimen collected from a human in Bucaramanga, Santander, Colombia, on April 25, 2007, and contributed to WRCEVA by Gustavo Valbuena of the Department of Pathology, University of Texas Medical Branch, Galveston, Texas, USA, and Luis Villar of the Universidad Industrial de Santander, Bucaramanga, Santander, Colombia.¹ In order to remove contaminating mycoplasma, the first viral passage at BEI Resources was performed by polyethylenimine-mediated transfection of extracted viral RNA.

Dengue virus causes the most common vector-borne viral disease of humans, with over 50 million cases in tropical and subtropical regions each year.² The disease is now endemic in over 110 countries in the world, with Southeast Asia and the Western Pacific being the most seriously affected. Dengue disease is caused by one of four closely related, but antigenically distinct serotypes (designated DEN-1 to -4).² Infections produce a spectrum of clinical illnesses ranging from a nonspecific viral syndrome to severe and fatal hemorrhagic disease.^{3,4} Humans are the major host of dengue virus, with *Aedes* mosquitoes as the principal vectors.

Material Provided:

Each vial contains approximately 1.0 mL of cell lysate and supernatant from *Aedes albopictus* mosquito larval epithelial cells (clone C6/36; ATCC® CRL-1660™) infected with DEN-1, UIS 1162.

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

Packaging/Storage:

NR-49707 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: *Aedes albopictus* clone C6/36 cells (ATCC® CRL-1660™)

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: 7 to 9 days at 28°C and 5% CO₂

Cytopathic Effect: Cell rounding, sloughing and syncytia formation; confirmation of infectivity by immunofluorescence is recommended.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the WRCEVA program: Dengue Virus Type 1, UIS 1162, NR-49707."

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 \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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 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:

1. Tesh, R. B., Personal Communication.
2. Holmes, E. C. and S. S. Twiddy. "The Origin, Emergence and Evolutionary Genetics of Dengue Virus." Infect. Genet. Evol. 3 (2003): 19-28. PubMed: 12797969.
3. Malavige, G. N., et al. "Dengue Viral Infections." Postgrad. Med. J. 80 (2004): 588-601. PubMed: 15466994.
4. Kao, C. L., et al. "Laboratory Diagnosis of Dengue Virus Infection: Current and Future Perspectives in Clinical Diagnosis and Public Health." J. Microbiol. Immunol. Infect. 38 (2005): 5-16. PubMed: 15692621.

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

