

Dengue Virus Type 1 (DEN-1), Hawaii

Catalog No. NR-82

Derived from ATCC® VR-1254™

For research use only. Not for human use.

Contributor:

ATCC®

Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Flaviviridae*, *Flavivirus*

Species: Dengue virus type 1

Strain/Isolate: Hawaii

Original Source: Dengue virus type 1 (DEN-1), Hawaii was isolated in 1944 from the pooled serum of six patients in Hawaii.^{1,2}

Comments: DEN-1, Hawaii was deposited to ATCC® in 1964 by Dr. Charles L. Wisseman, Jr. and used to prepare ATCC® VR-71™ in suckling mouse. ATCC® VR-71™ was transferred to the National Institute of Allergy and Infectious Diseases (NIAID). NIAID V-574-001-522 was derived from ATCC® VR-71™ in mouse brain. NIAID V-574-001-522 was transferred to ATCC® in 1997 and used to produce ATCC® VR-1254™ in mouse brain, which was used as the inoculum for NR-82. The complete genome of DEN-1, Hawaii has been sequenced (GenBank: [KM204119](https://www.ncbi.nlm.nih.gov/nuccore/KM204119)).

Dengue virus causes the most common vector-borne viral disease of humans, with over 50 million cases in tropical and subtropical regions each year.³ 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).³ Infections produce a spectrum of clinical illness ranging from a nonspecific viral syndrome to severe and fatal hemorrhagic disease.^{4,5} Humans are the major host of dengue virus, with *Aedes aegypti* mosquitoes the principal vectors.

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells infected with DEN-1, Hawaii.

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

Packaging/Storage:

NR-82 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, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 80–90% confluent

Incubation: 7 to 15 days at 33°C to 37°C and 5% CO₂

Cytopathic Effect: Cell rounding and sloughing

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Dengue Virus Type 1, Hawaii, NR-82."

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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References:

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