

## Dengue Virus Type 2, New Guinea C

### Catalog No. NR-84

(Derived from ATCC® VR-1584™)

**For research use only. Not for use in humans.**

#### Contributor:

ATCC®

#### Manufacturer:

BEI Resources

#### Product Description:

Virus Classification: *Flaviviridae*, *Flavivirus*

Species: Dengue virus type 2

Strain/Isolate: New Guinea C

Original Source: Isolated in 1944 from the serum of a febrile man in New Guinea.<sup>1,2</sup>

Comments: Dengue virus type 2 (DEN-2), New Guinea C (NGC) was deposited at the ATCC® in 1960 by Dr. Charles L. Wisseman, Jr. and was used to prepare ATCC® VR-222™ in suckling mice. ATCC® VR-222™ was transferred to the National Institute of Allergy and Infectious Diseases (NIAID). NIAID V-575-001-522 was derived from ATCC® VR-222™ in suckling mice. NIAID V-575-001-522 was transferred to the ATCC® in 1997 and used to produce ATCC® VR-1255™ in suckling mice. ATCC® VR-1584™ was derived through tissue culture adaptation of ATCC® VR-1255™ and was used as the inoculum for NR-84. The complete genome of DEN-2, NGC has been sequenced (GenBank: [KM204118](#)).

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

#### Material Provided:

Each vial contains approximately 1.0 mL of cell lysate and supernatant from *Macaca mulatta* kidney epithelial cells (LLC-MK2; ATCC® CCL-7.1™) infected with DEN-2, NGC.

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

#### Packaging/Storage:

NR-84 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: *Macaca mulatta* kidney epithelial cells (LLC-MK2 derivative cells; ATCC® CCL-7.1™)

Growth Medium: Eagle's Minimum Essential Medium (EMEM; ATCC® 30-2003) supplemented with 2% fetal bovine serum (FBS; ATCC® 30-2020), or equivalent

Infection: Cells should be 70% to 80% confluent

Incubation: 5 to 8 days at 37°C

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 2, New Guinea C, NR-84."

#### 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*. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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# References:

1. Sabin, A. B. and R. W. Schlesinger. "Production of Immunity to Dengue with Virus Modified by Propagation in Mice." Science 101 (1945): 640–642. PubMed: 17844088.
2. Sabin, A. B. "Research on Dengue during World War II." Am. J. Trop. Med. Hyg. 1 (1952): 30–50. PubMed: 14903434.
3. 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.
4. Malavige, G. N., et al. "Dengue Viral Infections." Postgrad. Med. J. 80 (2004): 588–601. PubMed: 15466994.
5. 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.

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