Product Information Sheet for NR-3799

Dengue Virus Type 3, MK-594-87

Catalog No. NR-3799

For research use only. Not for human use.

Contributor:

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Product Description:

Virus Classification: *Flavivirus*, *Flaviviridae*
Species: Dengue virus type 3
Strain/Isolate: MK-594-87
Original Source: Dengue virus type 3 (DEN-3), MK-594-87 was isolated in 1987 in Thailand.[1]
Comments: DEN-3, MK-594-87 was deposited to BEI Resources by Dr. D. J. Gubler while at CDC, Fort Collins.

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 illness ranging from a nonspecific viral syndrome to severe and fatal hemorrhagic disease.[3,4] 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 *Aedes albopictus* clone C6/36 cells (ATCC® CRL-1660™) infected with DEN-3, MK-594-87.

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

Packaging/Storage:

NR-3799 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -70°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: Minimum Essential Medium with Earle's salts supplemented with 2% fetal bovine serum, 2 mM L-glutamine and 1 mM sodium pyruvate
Infection: Cells should be 80% to 90% confluent (not 100% confluent)
Incubation: 6 to 10 days at 28°C and 5% CO_2
Cytopathic Effect: Cell fusion

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Dengue Virus Type 3, MK-594-87, NR-3799."

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:

1. Das, S., et al. "Detection and Serotyping of Dengue Virus in Serum Samples by Multiplex Reverse Transcriptase PCR-Ligase Detection Reaction Assay." J. Clin. Microbiol. 46 (2008): 3276-3284. PubMed: 18685000.

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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.
5. Ooi, E.-E. and D. J. Gubler. "Dengue in Southeast Asia: Epidemiological Characteristics and Strategic Challenges in Disease Prevention." Cad. Saúde Pública 25 (2009): S115-S124. PubMed: 19287856.
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7. Clyde, K., J. L. Kyle, and E. Harris. "Recent Advances in Deciphering Viral and Host Determinants of Dengue Virus Replication and Pathogenesis." J. Virol. 80 (2006): 11418-11431. PubMed: 16928749.
8. Innis, B. L. and K. H. Eckels. "Progress in Development of a Live-Attenuated, Tetravalent Dengue Virus Vaccine by the United States Army Medical Research and Materiel Command." Am. J. Trop. Med. Hyg. 69 (2003): 1-4. PubMed: 14756126.

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