Product Information Sheet for NR-49913

Mayaro Virus, TRVL 4675

Catalog No. NR-49913

For research use only. Not for human use.

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

Manufacturer:
BEI Resources

Product Description:
Virus Classification: *Togaviridae*, *Alphavirus*
Species: Mayaro virus
Strain/Isolate: TRVL 4675
Original Source: TRVL 4675 is a prototype strain of Mayaro virus (MAYV). It was isolated from the serum of a human in Mayaro County, Trinidad on August 23, 1954,[1,2] and contributed to WRCEVA by the Yale Arbovirus Research Unit, Rockefeller Funded Collection, Yale University, New Haven, Connecticut, USA.
Comments: MAYV, TRVL 4675 is a D genotype virus. Removal of contaminating mycoplasma required three additional virus passages at BEI Resources in the presence of Mycoplasma Removal Reagent (MRA).

MAYV is a New World alphavius that is the etiologic agent of Mayaro fever, an acute febrile illness sometimes accompanied by severe and persistent arthritis. MAYV was first isolated in Trinidad in 1954, and there have been sporadic outbreaks of Mayaro fever in South America since.[3] The enzootic transmission cycle of MAYV is not fully understood, but the occurrence of relatively large outbreaks of Mayaro fever[4] and the competence of *Aedes* mosquitoes for transmission of MAYV[5] suggest the potential for an urban human-mosquito-human transmission cycle to emerge.

There are two distinct genotypes of MAYV, D and L. Genotype D includes viruses isolated from all countries where MAYV has been detected, while genotype L strains have been found only in Brazil.[2,3]

Material Provided:
Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells infected with MAYV, TRVL 4675.

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

Packaging/Storage:
NR-49913 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 75% to 90% confluent
Incubation: 1 to 5 days at 37°C and 5% CO_2
Cytopathic Effect: Cell rounding and detachment

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH, as part of the WRCEVA program: Mayaro Virus, TRVL 4675, NR-49913."

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:

1. Tesh, R. B., Personal Communication.
2. Powers, A. M., et al. "Genetic Relationships among Mayaro and Una Viruses Suggest Distinct Patterns of Transmission." Am. J. Trop. Med. Hyg. 75 (2006): 461-469. PubMed: 16968922.
3. Auguste, A. J., et al. "Evolutionary and Ecological Characterization of Mayaro Virus Strains Isolated During an Outbreak, Venezuela, 2010." Emerg. Infect. Dis. 21 (2015): 1742-1750. PubMed: 26401714.
4. LeDuc, J. W., F. Pinheiro, and A. Travassos da Rosa. "An Outbreak of Mayaro Virus Disease in Belterra, Brazil. II. Epidemiology." Am. J. Trop. Med. Hyg. 30 (1981): 682-688. PubMed: 6266264.
5. Long, K. C., et al. "Experimental Transmission of Mayaro Virus by *Aedes aegypti*." Am. J. Trop. Med. Hyg. 85 (2011): 750-757. PubMed: 21976583.

Support Provided by NIAID

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