

La Crosse Virus, 6716-05

Catalog No. NR-51643

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Peribunyaviridae*, *Orthobunyavirus*

Species: La Crosse virus

Group: California Serogroup (CSG)

Strain/Isolate: 6716-05

Original Source: La Crosse virus (LACV), 6716-05 was isolated from a pool of mosquitoes (*Aedes triseriatus*) in Fairfield, Connecticut, USA in 2005 and contributed to Arbovirus Reference Collection (ARC) by Philip Armstrong of The Connecticut Agricultural Research Station, Connecticut, USA.^{1,2}

LACV is a tri-segmented negative sense RNA virus, with a genome consisting of L, M and S segments.³ LACV belongs to the California serogroup (CSG), a closely related group of orthobunyaviruses in the family *Peribunyavirus*. LACV is the most pathogenic member of the CSG, and the second most common after West Nile virus.⁴ LACV is a leading cause of encephalitis, especially among children, in the Midwest and Appalachian areas of the USA, although the range is expanding in North America.

LACV, 6716-05 is the first La Crosse virus isolated in the New England area of the USA. Isolate 6716-05 represents a distinct lineage of LACV, diverging earliest from other strains found in southeastern, central and northeastern USA.²

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells infected with LACV, 6716-05.

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

Packaging/Storage:

NR-51643 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 E6; ATCC® CRL-1586™)

Growth Medium: Dulbecco's Modified Eagle's Medium modified to contain 4 mM L-glutamine, 4500 mg per L glucose, 1 mM sodium pyruvate, and 1500 mg per L sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 70% to 80% confluent

Incubation: 3 to 6 days at 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: La Crosse Virus, 6716-05, NR-51643."

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.

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References:

1. Russell, B. J., Personal Communication.
2. Armstrong, P. M. and T. G. Andreadis. "A New Genetic Variant of La Crosse Virus (*Bunyaviridae*) Isolated from New England." Am. J. Trop. Med. Hyg. 75 (2006): 491-496. PubMed: 16968927.
3. Evans, A. B. and K. E. Peterson. "Throw Out the Map: Neuropathogenesis of the Globally Expanding California Serogroup of Orthobunyaviruses." Viruses 11 (2019): 794. PubMed: 31470541.
4. Harding, S., et al. "La Crosse Virus: A Scoping Review of the Global Evidence." Epidemiol. And Infect. 147 (2018): 1-13. PubMed: 30516125.

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