

Madariaga Virus, BeAr436087 (formerly Eastern Equine Encephalitis Virus)

Catalog No. NR-41568

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Togaviridae, Alphavirus*

Species: Madariaga Virus (formerly Eastern Equine Encephalitis Virus)¹

Strain/Isolate: BeAr436087

Original Source: Madariaga virus (MADV), BeAr436087 was isolated in Vero cells from a mosquito pool collected in Fortaleza, Brazil in 1985, and passaged twice in suckling mouse brains to generate RNA. An infectious cDNA clone of the viral genome was constructed and rescued by electroporation of *in vitro* transcribed RNA.²⁻⁴

Comments: MADV, strain BeAr436087 is a naturally attenuated strain, causing no mortality in adult mice even when inoculated intracranially.² The complete genome sequence of MADV, BeAr436087 has been determined (GenBank: [EF151503](https://www.ncbi.nlm.nih.gov/nuclseq/EF151503)).

MADV, formerly known as South American eastern equine encephalitis virus (EEEV) is a zoonotic virus transmitted by mosquitoes.⁵ The virus can cause severe disease in horses, pigs, dogs, and some bird species. Human infections are usually asymptomatic, but some progress to severe encephalitis. The first human MADV outbreak was reported in Panama in 2010.⁶ Recently, MADV was separated from North American EEEV based on ecologic and genetic studies.¹ Three lineages of MADV (lineage II, III and IV) have been defined based on antigenicity and geographic distribution.

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells infected with Madariaga virus, BeAr436087.

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

Packaging/Storage:

NR-41568 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 76; ATCC® CCL-1587™)

Growth Medium: Dulbecco's Modified Eagle's Medium containing 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: 2 to 3 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: Madariaga Virus, BeAr436087, NR-41568."

Biosafety Level: 3

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. International Committee on Taxonomy of Viruses.
2. Aguilar, P. V., et al. "Structural and Nonstructural Protein Genome Regions of Eastern Equine Encephalitis Virus are Determinants of Interferon Sensitivity and Murine Virulence." J. Virol. 82 (2008): 4920-4930. PubMed: 18353963.
3. Arrigo, N. C., et al. "Cotton Rats and House Sparrows as Hosts for North and South American Strains of Eastern Equine Encephalitis Virus." Emerg. Infect. Dis. 16 (2010): 1373-1380. PubMed: 20735920.
4. Weaver, S. C., Personal Communication.
5. Go, Y. Y., U. B. R. Balasuriya, and C. K. Lee. "Zoonotic Encephalitides Caused by Arboviruses: Transmission and Epidemiology of Alphaviruses and Flaviviruses." Clin. Exp. Vaccine Res. 3 (2014): 58-77. PubMed: 24427764.
6. Carrera, J. P., et al. "Eastern Equine Encephalitis in Latin America." N. Engl. J. Med. 369 (2013): 732-744. PubMed: 23964935.

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