Enterovirus 71, Tainan/4643/1998, Mouse-Adapted

Catalog No. NR-51845

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Contributor:
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Manufacturer:
BEI Resources

Product Description:
Virus Classification: Picornaviridae, Enterovirus
Species: Enterovirus A
Type: 71 (also referred to as A71)
Strain/Isolate: Tainan/4643/1998, mouse-adapted

Original Source: Enterovirus 71 (EV-71), Tainan/4643/1998, mouse-adapted was derived from EV-71, Tainan/4643/1998 which had undergone four serial passages in mice (BEI Resources NR-472). The virus was further adapted by six sequential passages in AG129 mice before purification.1

Comments: The complete genome of EV-71, Tainan/4643/1998 has been sequenced (GenBank: AF304458).2 EV-71, Tainan/4643/1998, mouse-adapted was adapted from BEI Resources NR-472 to improve replication in AG129 mice by six sequential passages in mice, and designated EV-71, Tainan/4643/1998, mouse-passage 10 (MP10). The mouse-adapted virus was plaque purified in rhabdomyosarcoma (RD) cells and a virus stock was prepared by replication in RD cells.1

EV-71, a frequent cause of hand-foot-and-mouth disease, is a human enterovirus which was first identified in 1969.3 EV-71 can also cause a variety of severe neurological disorders, including aseptic meningitis, brainstem encephalitis and poliomyelitis-like paralysis [acute flaccid paralysis (AFP)]. Most of the fatal cases occur in children less than 5 years of age.4 Since 1997, there has been a significant increase in EV 71 epidemic activity throughout the Asia–Pacific region.5,6 The pathogenesis of EV-71 infection, especially the CNS involvement, is not yet clear.7,8 There is no effective antiviral treatment for severe EV-71 infections and no vaccine is available.

EV-71 is a small, non-enveloped,icosahedral virus with a single-stranded, approximately 7.5 kb RNA genome of positive polarity. The single open reading frame encodes a large polyprotein of approximately 2200 amino acids and is flanked by untranslated regions at the 5' and 3' ends.

Material Provided:
Each vial contains approximately 1 mL of cell lysate and supernatant from rhabdomyosarcoma (RD) cells infected with EV-71, Tainan/4643/1998, mouse-adapted.

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

Packaging/Storage:
NR-51845 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: Rhabdomyosarcoma cells (RD; ATCC® CCL-136™)
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 70% to 90% confluent
Incubation: 3 to 7 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: Enterovirus 71, Tainan/4643/1998, Mouse-Adapted, NR-51845.”

Biosafety Level: 2

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References:
1. Tarbet, E. B., Personal Communication.

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