Enterovirus Species A Type 71, USA/2018-23092

Catalog No. NR-52000

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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: USA/2018-23092

Original Source: Enterovirus species A type 71 (EV-A71), USA/2018-23092 was isolated in 2018 from the stool sample of a human subject suffering from acute flaccid myelitis in the USA.1
Comments: The complete genome of EV-A71, USA/2018-23092 has been sequenced (GenBank: MK652139).

EV-A71, a frequent cause of hand-foot-and-mouth disease, is a human enterovirus which was first identified in 1969.2 EV-A71 can also cause a variety of severe neurological disorders, including aseptic meningitis, brainstem encephalitis and poliomyelitis-like paralysis [acute flaccid myelitis (AFM)]. Most of the fatal cases occur in children less than 5 years of age.3 Since 1997, there has been a significant increase in EV-A71 epidemic activity throughout the Asia-Pacific region.4,5 The pathogenesis of EV-A71 infection, especially the CNS involvement, is not yet clear.6,7 There is no effective antiviral treatment for severe EV-A71 infections and no vaccine is available.

EV-A71 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-A71, USA/2018-23092.

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

Packaging/Storage:
NR-52000 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 80% to 95% confluent
Incubation: 3 to 5 days at 37°C and 5% CO2
Cytopathic Effect: Cell rounding and sloughing

Citation:
Acknowledgment for publications should read "The following reagent was contributed by Division of Viral Diseases, Centers for Disease Control and Prevention and National Institutes of Health, for distribution through BEI Resources, NIAID, NIH: Enterovirus Species A Type 71, USA/2018-23092, NR-52000."

Biosafety Level: 2

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References:

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