Enterovirus Species A Type 71, USA/WA/2016-19522

Catalog No. NR-51999

For research use only. Not for human use.

Contributor:
William Allan Nix, Polio and Picornavirus Laboratory Branch, Division of Viral Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

Manufacturer:
BEI Resources

Product Description:

Virus Classification: Picornaviridae, Enterovirus
Species: Enterovirus A
Type: A71
Strain/Isolate: USA/WA/2016-19522 (also referred to as USA/2016/19522)
Original Source: Enterovirus species A type 71 (EV-A71), USA/WA/2016-19522 was isolated in 2016 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/WA/2016-19522 has been sequenced (GenBank: KY888026).

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 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 human lung fibroblast (HLF-a) cells infected with EV-A71, USA/WA/2016-19522.

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

Packaging/Storage:

NR-51999 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: Human lung fibroblast cells (HLF-a; ATCC® CCL-199™)
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 90% 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 through BEI Resources, NIAID, NIH: Enterovirus Species A Type 71, USA/WA/2016-19522, NR-51999."

Biosafety Level: 2


Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.
Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

ATCC® is a trademark of the American Type Culture Collection.