Enterovirus 71 (EV-71), Tainan/4643/1998

Catalog No. NR-471

For research use only. Not for human use.

Contributor:
National Cheng Kung University, Tainan, Taiwan

Manufacturer:
BEI Resources

Product Description:
Virus Classification: Picornaviridae, Enterovirus, Enterovirus A
Agent: Enterovirus 71
Strain/Isolate: Tainan/4643/1998
Original Source: Enterovirus 71 (EV-71), Tainan/4643/1998 was isolated in 1998 from a patient suffering from encephalomyelitis in Tainan, Taiwan.¹
Comment: The complete genome of EV-71, Tainan/4643/1998 has been sequenced (GenBank: AF304458).²

EV-71, a frequent cause of hand-foot-and-mouth disease, is an 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. Most of the fatal cases occur in children less than 3 years of age.

Since 1997, there has been a significant increase in EV-71 epidemic activity throughout the Asia-Pacific region.⁴ ⁵ The pathogenesis of EV-71 infection, especially the central nervous system (CNS) involvement, is not yet clear.⁶ ⁷ There is no effective antiviral treatment for severe EV-71 infections and no vaccine is available.

EV-71 is a small, non-enveloped, icosahedral enterovirus with a single-stranded ~ 7.5 kilobase RNA genome of positive polarity. The single open reading frame encodes a large polyprotein of ~ 2200 amino acids and is flanked by untranslated regions at the 5’ and 3’ ends.⁴

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

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

Packaging/Storage:
NR-471 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: RD cells (ATCC® CCL-136™)
Growth Medium: Minimum Essential Medium supplemented with 2% irradiated fetal bovine serum, or equivalent
Infection: Cells should be 80–90% confluent (not 100% confluent)
Incubation: 3 to 5 days at 37°C and 5% CO₂
Cytopathic Effect: Cell rounding and detachment

Citation:
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Enterovirus 71 (EV-71), Tainan/4643/1998, NR-471.”

Biosafety Level: 2

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