Product Information Sheet for NR-471

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% CO_2
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
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:

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8. Hsiung, G. D. and J. R. Wang. "Enterovirus Infections with Special Reference to Enterovirus 71." J. Microbiol. Immunol. Infect. 33 (2000): 1–8. PubMed: 10806956.

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