# Product Information Sheet for NR-49133

## Enterovirus D68, US/IL/14-18956

## Catalog No. NR-49133

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## For research use only. Not for human use.

### Contributor:

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### Manufacturer:

BEI Resources
CDC Division of Viral Diseases (Lot 63264128)

### Product Description:

Virus Classification: *Picornaviridae, Enterovirus*
Species: Enterovirus D
Type: D68
Strain: US/IL/14-18956
Original Source: Enterovirus D68 (EV-D68), US/IL/14-18956 was isolated in September 2014 from a nasopharyngeal swab taken from a human in Illinois, USA.[1,2]
Comments: EV-D68, US/IL/14-18956 is representative of one of several co-circulating EV-D68 strains that have been identified in the 2014 outbreak in the US.[1] The complete genome of EV-D68, US/IL/14-18956 has been sequenced (GenBank: MK268345).

Enteroviruses are small, nonenveloped viruses with a positive-sense RNA genome belonging to *Picornaviridae* family. The genus *Enterovirus* includes 15 species, of which seven commonly infect humans: enterovirus A, B, C and D and rhinovirus A, B and C.[2] Humans are natural host of enteroviruses with infection mostly through fecal-oral and respiratory routes and clinical symptoms ranging from fever, weakness, diarrhea to complications such as lesions and organ failure.[3]

EV-D68 was first identified in California in 1962 from cases of bronchiolitis and pneumonia and was subsequently rarely reported in the United States until 2009. Clusters of severe respiratory disease were reported to the Centers for Disease Control and Prevention beginning in August 2014. EV-D68 was identified from a high percentage of initial cases, and severe EV-D68 infections became widespread across the United States in August and September.[2]

### Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from human rhabdomyosarcoma cells infected with EV-D68, US/IL/14-18956.

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

### Packaging/Storage:

NR-49133 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 rhabdomyosarcoma cells (RD cells; 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: 1 to 6 days at 33°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 D68, US/IL/14-18956, NR-49133."

### 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:**

1. Oberste, M. S., Personal Communication.
2. Brown, B. A., et al. "Seven Strains of Enterovirus D68 Detected in the United States during the 2014 Severe Respiratory Disease Outbreak." Genome Announc. 2 (2014): e01201-14. PubMed: 25414503.
3. Zhang, Y., J. Li and Q. Li. "Immune Evasion of Enteroviruses Under Innate Immune Monitoring." Front. Microbiol. 9 (2018): 1866. PubMed: 30154774.



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