

## Enterovirus D68, Fermon

### Catalog No. NR-51430

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#### Contributor:

National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIAID/NIH)

#### Manufacturer:

BEI Resources

#### Product Description:

Virus Classification: *Picornaviridae*, *Enterovirus*

Species: Enterovirus D

Type: D68

Strain/Isolate: Fermon (also referred to as CA62-1)<sup>1</sup>

NIAID: V-067-002-020

Original Source: Enterovirus D68 (EV-D68), Fermon, was isolated from a nasopharyngeal swab from a hospitalized pediatric patient with pneumonia in California, USA, in 1962.<sup>2</sup>

Comments: Enterovirus D68 (EV-D68), Fermon is the prototype strain of EV-D68.<sup>1</sup> The complete genome of EV-D68, Fermon has been sequenced (GenBank: [AY426531](https://www.ncbi.nlm.nih.gov/nuclseq/AY426531)).

Enteroviruses are small non-enveloped viruses whose genome consists of a single strand of positive-sense RNA.<sup>3</sup> EV-D68 was first identified in California in 1962 from cases of bronchiolitis and pneumonia and was rarely reported in the United States. Clusters of severe respiratory disease were reported to the Centers for Disease Control and Prevention beginning in August 2014.<sup>3</sup> 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.<sup>3</sup>

#### Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from human lung fibroblasts infected with EV-D68, Fermon.

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

#### Packaging/Storage:

NR-51430 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 fibroblasts (MRC-5; ATCC® CCL-171™)

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: 2 to 4 days at 33°C and 5% CO<sub>2</sub>

Cytopathic Effect: Cell rounding and detachment

#### Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Enterovirus D68, Fermon, NR-51430."

#### 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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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#### References:

1. Oberste, M. S., et al. "Enterovirus 68 is Associated with Respiratory Illness and Shares Biological Features with

- Both the Enteroviruses and the Rhinoviruses." J. Gen. Virol. 85 (2004): 2577-2584. PubMed: 15302951.
2. Scheible, J. H., V. L. Fox and E. H. Lennette. "A Probable New Human Picornavirus Associated with Respiratory Diseases." Am. J. Epidemiol. 85 (1967): 297-310. PubMed: 4960233.
  3. 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.

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