

Measles Virus, MVs/Maryland.USA/18.18 [B3]

Catalog No. NR-52251

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Paramyxoviridae, Morbillivirus*

Species: Measles virus

Strain/Isolate: MVs/Maryland.USA/18.18 [B3]

Genotype: B3

Original Source: Measles virus (MeV), MVs/Maryland.USA/18.18 [B3] was collected from a throat swab in May 2018 in Maryland, USA and was isolated on March 22, 2019.¹

Comments: MeV, MVs/Maryland.USA/18.18 [B3] belongs to genotype B3 and the sequence of the nucleoprotein gene is available (GenBank: [MH375603](https://www.ncbi.nlm.nih.gov/nuccore/MH375603)).

MeV is a single-strand negative sense non-segmented RNA virus.² MeVs are divided into 8 clades, designated A through H, with 24 genotypes based on the sequences of the hemagglutinin (HA) and nucleoprotein (N) genes. The sequence of the 450 nucleotides that encode the carboxyl-terminal 150 amino acids of the nucleoprotein (N-450) is needed to determine the genotype.^{2,3} In 2018, four new genotypes were identified: B3, D4, D8 and H1. In 2000, measles was declared eliminated in the US by the WHO, but in 2019 the highest numbers of cases and outbreaks were reported.⁴

Material Provided:

Each vial contains approximately 1.0 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells with human signaling lymphocytic activation molecule (Vero E6-hSLAM) infected with MeV, MVs/Maryland.USA/18.18 [B3].

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

Packaging/Storage:

NR-52251 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: *Cercopithecus aethiops* kidney epithelial cells with human signaling lymphocytic activation molecule (Vero E6-hSLAM)

Growth Medium: Dulbecco's Modified Eagle's Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1500 mg per L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 70% to 90% confluent

Incubation: 2 to 4 days at 37°C and 5% CO₂

Cytopathic Effect: Syncytia formation

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Measles Virus, MVs/Maryland.USA/18.18 [B3], NR-52251."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbli5/index.htm.

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References:

1. Bankamp, B., Personal Communication.
2. Coughlin, M. M., et al. "Perspective on Global Measles Epidemiology and Control and the Role of Novel Vaccination Strategies." *Viruses* 9 (2017). doi: 10.3390/v9010011. PubMed: 28106841.
3. Magana, L. C., et al. "Complete Genome Sequences of Mumps and Measles Virus Isolates from Three States in the United States." *Genome Announc.* 33 (2017). doi: 10.1128/genomeA.00748-17. PubMed: 28818890.
4. Patel, M., et al. "National Update on Measles Cases and Outbreaks – United States, January 1 – October 1, 2019." *MMWR* 40 (2019): 893-896. PubMed: 31600181.

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