

### Vaccinia Virus, Modified Vaccinia Ankara (MVA), From BHK-21 Cells

#### Catalog No. NR-726

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#### Contributor:

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#### Product Description:

Virus Classification: *Poxviridae, Orthopoxvirus*

Agent: Vaccinia virus (VACV)

Strain: Modified VACV Ankara (MVA)

Source: NIAID, NIH

Comments: The early passage history of MVA is complex.<sup>1</sup> The complete genomic sequence of MVA has been determined (GenBank: U94848).<sup>2</sup>

MVA is a highly attenuated strain of vaccinia virus<sup>3</sup> and does not appear to replicate in most mammalian cells. Some experts feel MVA can be handled safely by trained personnel without the need for vaccination.

#### Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from hamster kidney cells (BHK-21) infected with VACV, MVA (BEI Resources NR-1).

#### Packaging/Storage:

NR-726 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: BHK-21 cells (ATCC® CCL-10™)

Growth Medium: Minimum Essential Medium with Earle's salts and non-essential amino acids supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 80 to 90% confluent (not 100% confluent)

Incubation: 3 to 5 days at 37°C and 5% CO<sub>2</sub>

Cytopathic Effect: Cell rounding and cell lysis

#### Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Vaccinia Virus, Modified Vaccinia Ankara (MVA), From BHK-21 Cells, NR-726."

#### 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. 4th ed. Washington, DC: U.S. Government Printing Office, 1999. HHS Publication No. (CDC) 93-8395. This text is available online at [www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm).

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#### References:

1. Mayr, A., V. Hochstein-Mintzel, and H. Stickl. "Passage History, Properties, and Applicability of the Attenuated Vaccinia Virus Strain MVA." *Infection* 3 (1975): 6–14.
2. Antoine, G., F. Scheifflinger, F. Dörner, and F. G. Falkner. "The Complete Genomic Sequence of the Modified Vaccinia Ankara Strain: Comparison with Other Orthopoxviruses." *Virology* 244 (1998): 365–396. PubMed: 9601507. GenBank: U94848.
3. Wyatt, L. S., et al. "Marker Rescue of the Host Range Restriction Defects of Modified Vaccinia Virus Ankara." *Virology* 251 (1998): 334–342. PubMed: 9837798.

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