

**Vaccinia Virus, Western Reserve (Mouse adapted)**

**Catalog No. NR-56**  
(Derived from ATCC® VR-119™)

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

**Contributor:**  
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**Product Description:**

Virus Classification: *Poxviridae, Orthopoxvirus*

Agent: Vaccinia virus (VACV)

Isolate/Strain: Western Reserve (WR; mouse adapted)

Source: Derived from the original New York City Board of Health (NYCBH) strain of VACV by intracerebral passages in mice<sup>1,2</sup>

Comments: The WR strain of VACV was deposited at ATCC® in 1970 by Dr. Joel M. Dalrymple, Walter Reed Army Institute of Research. The complete genomic sequence of the WR strain of VACV has been determined (GenBank: NC\_006998).<sup>3</sup>

The WR strain of VACV has been utilized in constructing vectors for gene expression<sup>4</sup> and in producing viral proteins and DNA.<sup>5</sup>

**Material Provided:**

Each vial contains approximately 1 mL of cell lysate and supernatant from African green monkey kidney cells (Vero) infected with VACV, WR (mouse adapted).

**Packaging/Storage:**

NR-56 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: Vero cells (ATCC® CCL-81™)

Growth Medium: Eagle's Minimum Essential Medium supplemented with 2% fetal bovine serum, or equivalent (lot-specific details are on the Certificate of Analysis)

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

Incubation: 2 to 4 days at 37°C and 5% CO<sub>2</sub>

Cytopathic Effect: Cells 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, Western Reserve (Mouse adapted), NR-56."

**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). This publication recommends that all persons working in or entering laboratory or animal care areas where activities with vaccinia virus are being conducted should have documented evidence of satisfactory vaccination within the preceding ten years.

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**References:**

1. Parker, R. F., L. H. Bronson, and R. H. Green. "Further Studies of the Infectious Unit of Vaccinia." J. Exp. Med. 74 (1941): 263–281.
2. Bronson, L. H. and R. F. Parker. "The Neutralization of Vaccine Virus by Immune Serum: Titration by the Intracerebral Inoculation of Mice." J. Bacteriol. 41 (1941): 56–57.
3. Esposito, J. J., et al. "Vaccinia Virus, Complete Genome." Direct submission, 24 Feb 2003. GenBank: NC\_006998.
4. Mackett, M. and G. L. Smith. "Vaccinia Virus Expression Vectors." J. Gen. Virol. 67 (1986): 2067–2082. PubMed: 3531399.
5. Salzman, N. P. and E. D. Sebring. "Sequential Formation of Vaccinia Virus Proteins and Viral Deoxyribonucleic Acid Replication." J. Virol. 1 (1967): 16–23. PubMed: 4248263.
6. Smee, D. F., et al. "Characterization and Treatment of Cidofovir-Resistant Vaccinia (WR Strain) Virus Infections in Cell Culture and in Mice." Antivir. Chem. Chemother. 16 (2005): 203–211. PubMed: 16004083.
7. Gallego-Gómez, J. C., et al. "Differences in Virus-Induced Cell Morphology and in Virus Maturation between MVA and Other Strains (WR, Ankara, and NYCBH) of Vaccinia Virus in Infected Human Cells." J. Virol. 77 (2003): 10606–10622. PubMed: 12970445.
8. Ramirez, J. C., M. M. Gherardi, and M. Esteban. "Biology of Attenuated Modified Vaccinia Virus Ankara Recombinant Vector in Mice: Virus Fate and Activation of B- and T-Cell Immune Responses in Comparison with the Western Reserve Strain and Advantages as a Vaccine." J. Virol. 74 (2000): 923–933. PubMed: 10623755.

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