

Vaccinia Virus, Western Reserve, Recombinant Expressing Machupo Virus, Carvallo Glycoprotein Precursor

Catalog No. NR-15501

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Poxviridae, Orthopoxvirus*

Agent: Vaccinia virus

Strain: rVACV-MACV GPC [Vaccinia virus (VACV), Western Reserve recombinant expressing the glycoprotein precursor (GPC) of Machupo virus (MACV), Carvallo]

Source:¹ A codon-optimized synthetic ORF encoding the entire glycoprotein precursor protein from segment S of MACV, Carvallo² was inserted into the pRB21 transfer vector, bringing it under the control of a synthetic VACV early/late promoter (PSYN). Recombinant VACV was made by transfecting the transfer plasmid into CV-1 cells infected with the VACV strain vRB12.

MACV is an Arenavirus (*Arenaviridae, Arenavirus*) which is the etiologic agent of Bolivian hemorrhagic fever.³

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells (BSC-40, ATCC® CRL-2761™) infected with vaccinia virus, rVACV-MACV GPC.

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

Packaging/Storage:

NR-15501 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen on dry ice 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: BSC-40 cells (ATCC® CRL-2761™)

Growth Medium: Dulbecco's Modified Eagle Medium supplemented with 10% fetal bovine serum, 1 mM sodium

pyruvate and 2 mM L-glutamine

Infection: Cells should be 95% to 100% confluent

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

Cytopathic Effect: Cell rounding and detachment

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Vaccinia Virus, Western Reserve, Recombinant Expressing Machupo Virus, Carvallo Glycoprotein Precursor, NR-15501."

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.

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References:

1. Kotturi, M. F., et al. "A Multivalent and Cross-Protective Vaccine Strategy Against Arenaviruses Associated with Human Disease." PLoS Pathog. 5 (2009): e1000695. PubMed: 20019801.
2. Archer, A. M. and R. Rico-Hesse. "High Genetic Divergence and Recombination in Arenaviruses from the Americas." Virology 304 (2002): 274-281. PubMed: 12504568.
3. Webb, P. A., et al. "Some Characteristics of Machupo Virus, Causative Agent of Bolivian Hemorrhagic Fever." Am J. Trop. Med. Hyg. 16 (1967): 531-538. PubMed: 4378149.

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