# Vaccinia Virus, MVA/S, Recombinant expressing SARS-CoV Spike (S) Protein

## Catalog No. NR-623

This reagent is the property of the U.S. Government.

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

### Contributor:

Bernard Moss, M.D., Ph.D., Chief, Laboratory of Viral Diseases, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland.

### Product Description:

Virus Classification: *Poxviridae, Orthopoxvirus*
Agent: Vaccinia virus
Strain: MVA/S (Modified vaccinia virus Ankara recombinant expressing the spike (S) protein of SARS-CoV)
Source:[1] A cDNA clone containing the entire open reading frame encoding the S protein of the Urbani strain of SARS-CoV was modified by introducing silent mutations that eliminated two poxvirus transcription termination motifs (TTTTTNT). The S gene was amplified and inserted in the pLW44 transfer vector, bringing it under the control of the vaccinia virus modified H5 early/late promoter. Recombinant MVA was made by transfecting the transfer plasmid into primary chick embryo fibroblast cells infected with MVA.

### Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from chicken embryo cells (SL-29, ATCC® CRL-1590™) infected with vaccinia virus, MVA/S.

### Packaging/Storage:

NR-623 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: SL-29 cells (ATCC® CRL-1590™)
Growth Medium: Dulbecco's Modified Eagle Medium supplemented with 5% tryptose phosphate broth and 5% fetal bovine serum, or equivalent
Infection: Cells should be 80% to 90% confluent (not 100% confluent)
Incubation: 2 to 4 days at 37°C and 5% $CO_2$
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, MVA/S, Recombinant expressing SARS-CoV Spike (S) Protein, NR-623."

### 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. MVA is a highly attenuated strain of vaccinia virus 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.

### Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government make any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

### Use Restrictions:

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to negotiate a license. U.S. Government contractors may need a license before first commercial sale.

### References:

1. Bisht, H., et al. "Severe Acute Respiratory Syndrome Coronavirus Spike Protein Expressed by Attenuated Vaccinia Virus Protectively Immunizes Mice." Proc. Nat. Acad. Sci. 101 (2004): 6641–6646. PubMed: 15096611.

ATCC® is a trademark of the American Type Culture Collection.

**Biodefense and Emerging Infections Research Resources Repository**
P.O. Box 4137
Manassas, VA 20108-4137 USA
www.beiresources.org
800-359-7370
Fax: 703-365-2898
E-mail: contact@beiresources.org