

### Vaccinia Virus (WR) A33R Protein with C-terminal Histidine Tag, Recombinant from baculovirus

Catalog No. NR-545

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

#### Contributor:

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#### Product Description:

NR-545 is a recombinant form of the A33R membrane glycoprotein (A33Rt; residues 58 to 185, C-terminal histidine-tagged) of the Western Reserve (WR) strain of vaccinia virus. The full length A33R protein is 185 residues (GenPept: P68617).<sup>1,2</sup> NR-545 was produced in Sf9 insect cells using a baculovirus expression system and was purified using ammonium sulfate precipitation and nickel affinity chromatography. The predicted protein sequence is shown in Table 1 below. Non-vaccinia virus residues are underlined.

#### Material Provided:

Each vial contains approximately 0.5 mg of NR-545 in 50 mM borate buffer (pH 8) containing 100 mM NaCl. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

#### Packaging/Storage:

NR-545 was packaged aseptically in cryovials. The product is provided on dry ice and should be stored at -60°C or colder immediately upon arrival. Repeated freeze-thaw cycles of this product should be avoided.

#### Functional Activity:

NR-545 was demonstrated to be functionally active based on its reactivity with human polyclonal anti-vaccinia virus immune globulin (VIG) and a monoclonal antibody to A33R (BEI Resources NR-777).

#### 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 (WR) A33R Protein with C-terminal Histidine Tag, Recombinant from baculovirus, NR-545."

#### Biosafety Level: 1

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. Smith, G. L., Y. S. Chan, and S. T. Howard. "Nucleotide Sequence of 42 Kbp of Vaccinia Virus Strain WR from near the Right Inverted Terminal Repeat." J. Gen. Virol. 72 (1991): 1349-1376. PubMed: 2045793.
2. Amegadzie, B. Y., B. Y. Ahn, and B. Moss. "Identification, Sequence, and Expression of the Gene Encoding a *M*<sub>r</sub> 35,000 Subunit of the Vaccinia Virus DNA-Dependent RNA Polymerase." J. Biol. Chem. 266 (1991): 13712-13718. PubMed: 1856205.

3. Lustig, S., et al. "Combinations of Polyclonal or Monoclonal Antibodies to Proteins of the Outer Membranes of the Two Infectious Forms of Vaccinia Virus Protect Mice against a Lethal Respiratory Challenge." *J. Virol.* 79 (2005): 13454–13462. PubMed: 16227266.
4. Fogg, C., et al. "Protective Immunity to Vaccinia Virus Induced by Vaccination with Multiple Recombinant Outer Membrane Proteins of Intracellular and Extracellular Virions." *J. Virol.* 78 (2004): 10230–10237. PubMed: 15367588.

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Table 1 – Predicted Protein Sequence					
1	<u>DPRLNQCMSA</u>	NEAAITDAAV	AVAAASSTHR	KVASSTTQYD	HKESCNGLYY
51	<u>QGSCYILHSD</u>	YQLFSDAKAN	CTAESSTLPN	KSDVLITWLI	DYVEDTWGSD
101	<u>GNPITKTTSD</u>	<u>YQSDVSQEV</u>	RKYFCVKTMN	<u>HHHHHH</u>	

Non-vaccinia virus amino acids are underlined.