

**Vaccinia Virus (WR) B5R Protein with N-Terminal Histidine Tag, Recombinant from Baculovirus**

**Catalog No. NR-22132**

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

**Contributor:**

Gary H. Cohen, Ph.D., Professor and Chair, Department of Microbiology, School of Dental Medicine, University of Pennsylvania, Philadelphia, Pennsylvania and Roselyn J. Eisenberg, Ph.D., Professor, Department of Pathobiology, Head, Laboratories of Microbiology and Immunology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania.

**Manufacturer:**

BEI Resources

**Product Description:**

A recombinant form of the B5R membrane glycoprotein [B5R (275t)] of the Western Reserve (WR) strain of vaccinia virus containing an N-terminal histidine-tag was produced in Sf9 insect cells using a baculovirus expression system<sup>1</sup> and purified using nickel affinity chromatography. The predicted protein sequence is shown in Table 1. NR-22132 contains residues 20 to 275 of the B5R protein. The full length B5R protein is 317 residues (GenPept: Q01227).<sup>2</sup> NR-22132 was expressed from the same recombinant baculovirus vector as NR-2624, which was produced in cabbage looper (*Trichoplusia ni*) insect larvae.<sup>3</sup>

**Material Provided:**

Each vial contains approximately 100 µg of NR-22132 in approximately 100 µL of PBS (pH 7.4) with 50% glycerol (v/v). The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

**Packaging/Storage:**

NR-22132 was packaged aseptically in cryovials. The product is provided on dry ice and should be stored at -20°C or colder immediately upon arrival. Repeated freeze-thaw cycles of this product should be avoided.

**Functional Activity:**

NR-22132 was demonstrated to be functionally active based on its reactivity with human polyclonal anti-vaccinia virus immune globulin (VIG; BEI Resources NR-650) and mouse monoclonal antibodies to B5R (BEI Resources NR-422 to NR-424, NR-427 to NR-431, NR-552 to NR-554, NR-556 and NR-559 to NR-562).

**Citation:**

Acknowledgment for publications should read "The following

reagent was obtained through BEI Resources, NIAID, NIH: Vaccinia Virus (WR) B5R Protein with N-Terminal Histidine Tag, Recombinant from Baculovirus, NR-22132."

**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. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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**References:**

1. Aldaz-Carroll, L., et al. "Epitope-Mapping Studies Define Two Major Neutralization Sites on the Vaccinia Virus Extracellular Enveloped Virus Glycoprotein B5R." J. Virol. 79 (2005): 6260–6271. PubMed: 15858010.
2. 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.
3. O'Connell, K. P., et al. "Production of a Recombinant Antibody Fragment in Whole Insect Larvae." Mol. Biotechnol. 36 (2007): 44-51. PubMed: 17827537.
  4. 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.
  5. 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	DLHHHHHTC	TVPTMNAKL	TSTETSFNDK	QKVTFTCDQG	YHSSDPNAV
51	ETDKWKYENP	CKKMCTVSDY	ISELYNKPLY	EVNSTMTLSC	NGETKYFRCE
101	EKNGNTSWND	TVTCPNAECQ	PLQLEHGSCQ	PVKEKYSFGE	YMTINCDVGY
151	EVIGASYISC	TANSWNVIPS	CQQKCDMPSL	SNGLISGSTF	SIGGVIHLSC
201	KSGFTLTGSP	SSTCIDGKWN	PVLPICVRTN	EEFDPVDDGP	DDETDLKLS
251	KDVVQYEQEI	ESLE			

Vector-derived amino acids – Residues 1-2

Histidine tag – Residues 3-8

B5R – Residues 9-264