L1R Protein from Vaccinia Virus (WR) with C-terminal Histidine Tag, Recombinant from Baculovirus

Catalog No. NR-21986

For research use only. Not for use in humans.

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, USA

Manufacturer:
BEI Resources

Product Description:
A recombinant form of the L1R membrane glycoprotein of the Western Reserve (WR) strain of vaccinia virus containing a C-terminal hexa-histidine tag was produced in High Five™ insect cells using a baculovirus expression system and purified using nickel affinity chromatography.[1] The predicted protein sequence is shown in Figure 1. NR-21986 contains residues 1 to 185 of the L1R protein. The full-length L1R protein is 250 residues (GenPept: P07612).[2] NR-21986 has a theoretical molecular weight of 20.7 kilodaltons.

Material Provided:
Each vial of NR-21986 contains 100 to 200 µg of purified recombinant L1R protein in PBS (pH 7.4) with 50% glycerol (v/v). The protein volume concentration, expressed as mg/mL, is shown on the Certificate of Analysis.

Packaging/Storage:
NR-21986 was packaged aseptically in cryovials. This product is provided on ice bricks 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-21986 was demonstrated to be reactive with human polyclonal anti-vaccinia virus immune globulin (VIG; BEI Resources NR-650) and mouse monoclonal antibodies to L1R (BEI Resources NR-417 to NR-421 and NR-566).

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: L1R Protein from Vaccinia Virus (WR) with C-terminal Histidine Tag, Recombinant from Baculovirus, NR-21986."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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 makes 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 the 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 determine if a license is required. U.S. Government contractors may need a license before the first commercial sale.

References:
1. Aldaz-Carroll, L., et al. "Physical and Immunological Characterization of a Recombinant Secreted Form of the Membrane Protein Encoded by the Vaccinia Virus L1R Gene." Virology 341 (2005): 59-71. PubMed: 16083934.
2. Su, H.-P., et al. "The 1.51-Å Structure of the Poxvirus L1 Protein, a Target of Potent Neutralizing Antibodies." Proc. Natl. Acad. Sci. USA 102 (2005): 4240-4245. PubMed: 15761054.

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.

Support Provided by NIAID

Figure 1: Predicted Protein Sequence

```
1   DPAMGAAASI QTTVNTLSER ISSKLEQEAN ASAQTKCDIE IGNFYIRQNH
51  GCNLTVKNMC SADADAQLDA VLSAATETYS GLTPEQKAYV PAMFTAALNI
101 QTSVNTVVRD FENYVKQTCN SSAVVDNKLK IQNVIIDECY GAPGSPTNLE
151 FINTGSSKGN CAIKALMQLT TKATTQIAPK QVAGTGVQHH HHHH
```

Plasmid-derived amino acids- Residues 1 to 3
VAC-WR L1R protein – Residues 4 to 188 [represents 1 to 185 amino acid residues of the L1R protein from Vaccinia Virus (WR) (GenPept: P07612)]
Hexa-histidine tag – Residues 189 to 194

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898