# Certificate of Analysis for NR-10501

## Variola Major Virus (Bangladesh-1975) M1R Protein, Recombinant from Baculovirus

## Catalog No. NR-10501

**Product Description:** NR-10501 is a recombinant form of the variola major (Bangladesh-1975) M1R protein, a homolog of the vaccinia virus (WR) L1R protein. The full-length variola major virus M1R protein contains 250 amino acid residues (GenPept: AAA60821; GenBank: L22579). NR-10501 is a truncated form of M1R, comprising amino acid residues 1-185, and lacking the C-terminal transmembrane domain of the intact protein. NR-10501 was produced by baculovirus infection of *Trichoplusia ni* insect larvae using the proprietary Chesapeake PERL technology, PERLXpress.[1] The protein was purified using standard chromatographic methods.

**Lot: 58371071** **Manufacturing Date: 10OCT2008**

| TEST | SPECIFICATIONS | RESULTS |
|---|---|---|
| **SDS-PAGE (Coomassie Blue densitometer scan)** | Dominant bands, multiple glycoforms near 19 kDa<br>≥ 95% pure | Dominant bands, multiple glycoforms near 19 kDa<br>≥ 99% pure (Figure 1) |
| **Identification by Western Blot**<br>Mouse monoclonal antibody[2] to vaccinia L1R<br>Mouse monoclonal antibody[3] to vaccinia A33R | <br>Reactive<br>Not reactive | <br>Reactive (Figure 2)<br>Not reactive (Figure 3) |
| **Demonstration of Protein N-Glycosylation** | Size reduction of protein observed on SDS-PAGE when treated with de-glycosylating enzyme PNGase F | Size reduction of protein observed on SDS-PAGE when treated with de-glycosylating enzyme PNGase F (Figure 4) |
| **Concentration by Bicinchoninic Acid Protein Assay** | 1.0 mg/mL ± 0.3 mg/mL | 1.2 mg/mL |

[1]PERLXpress™, Chesapeake Protein Expression and Recovery Labs (C-PERL).
[2]VMC-2; provided by G. H. Cohen and R. J. Eisenberg (monoclonal antibody prepared from the same hybridoma as VMC-2 is available as BEI Resources NR-417).
[3]VMC-1; provided by G. H. Cohen and R. J. Eisenberg.

**Figure 1**

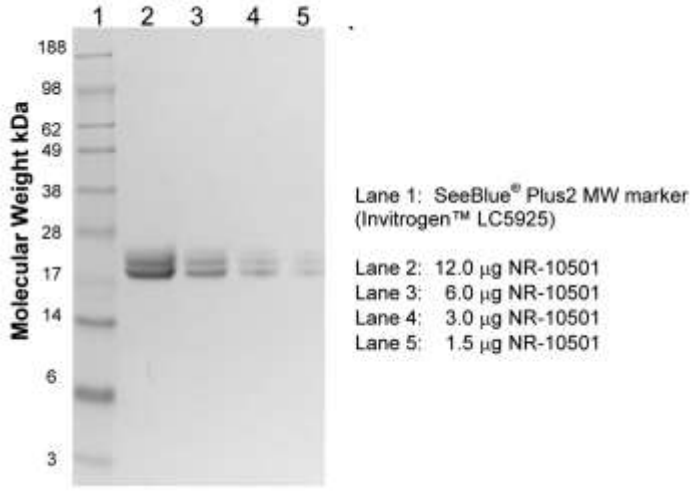
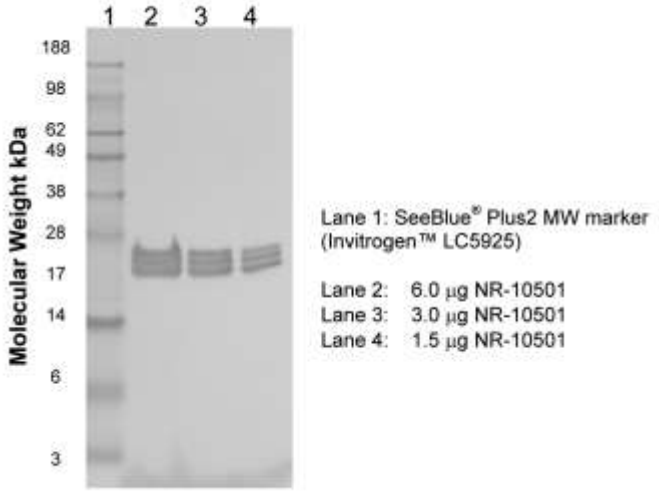


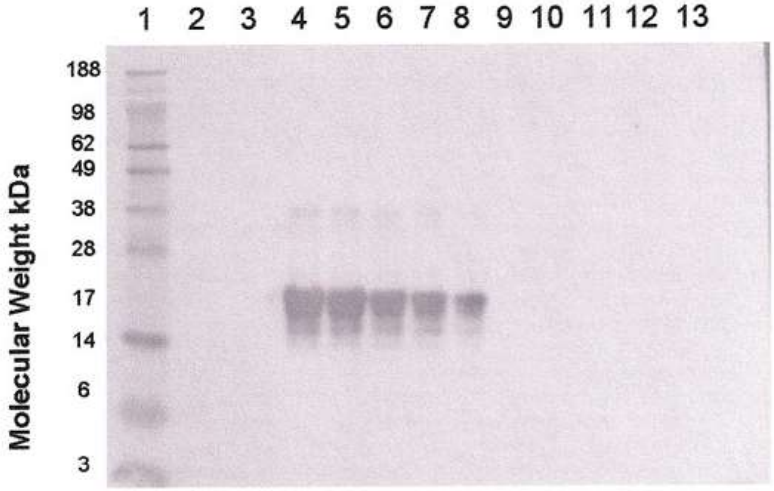

**Figure 2**




**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

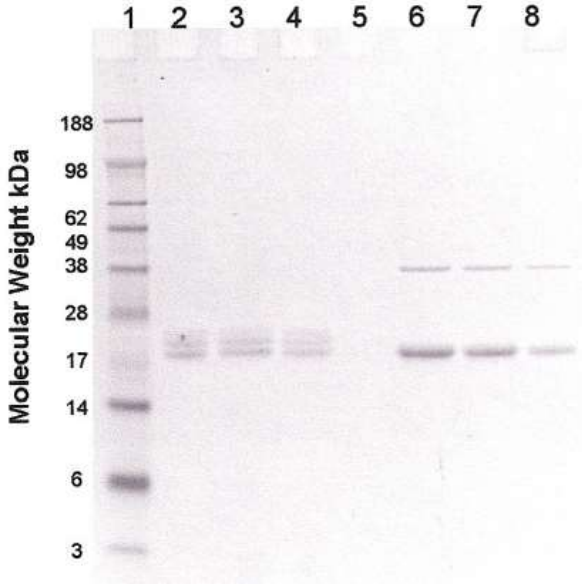
# Certificate of Analysis for NR-10501

**Figure 3**




Lane 1: SeeBlue® Plus2 MW markers (Invitrogen™ LC5925)
Lane 2: Blank
Lane 3: Blank
Lane 4: 5.5 µg A33R
Lane 5: 4.4 µg A33R
Lane 6: 3.3 µg A33R
Lane 7: 2.2 µg A33R
Lane 8: 1.1 µg A33R
Lane 9: 0.6 µg NR-10501
Lane 10: 1.2 µg NR-10501
Lane 11: 1.8 µg NR-10501
Lane 12: 2.4 µg NR-10501
Lane 13: 3.0 µg NR-10501

**Figure 4**




Lane 1: SeeBlue® Plus2 MW markers (Invitrogen™ LC5925)

Control samples:

Lane 2: 3.0 µg NR-10501
Lane 3: 3.4 µg NR-10501, + PNGase reaction buffer
Lane 4: 2.2 µg NR-10501, + PNGase reaction buffer
Lane 5: Blank

PNGase Reaction Samples:

Lane 6: 4.2 µg PNGase F digestion
Lane 7: 2.8 µg PNGase F digestion
Lane 8: 1.4 µg PNGase F digestion

Note: Lanes 6 – 8 show the presence of PNGase enzyme migrating at ~ 38kDa.

**Date:** 26 March 2009 **Signature:** Signature on File
**Title:** Technical Manager, BEI Authentication or designee

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the vendor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

Support Provided by NIAID



**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