

**Glycoprotein from Lassa Virus,
ISTH-2018-014, Recombinant from
Baculovirus**

Catalog No. NR-51469

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Contributor and Manufacturer:

BEI Resources

Product Description:

A recombinant form of the glycoprotein complex (GPC) from Lassa virus (LASV), ISTH-2018-014 (GenPept: [AZI96346](#)) was produced in Sf9 insect cells using a baculovirus expression system, purified by nickel affinity chromatography under denaturing conditions and refolded by direct dilution. The recombinant protein includes the GPC ectodomain, thrombin cleavage site, T4 foldon trimerization domain and a C-terminal octa-histidine tag.¹ LASV, ISTH-2018-014 was initially sequenced by the Irrua Specialist Teaching Hospital (ISTH), and the nucleotide sequence was codon-optimized for protein expression. The amino acid sequence is shown in Figure 1. NR-51469 has a theoretical molecular weight of 53,000 daltons.

Material Provided:

Each vial contains approximately 1 mL of NR-51469 in 20 mM Tris (pH 8) with 500 mM NaCl, 0.5% CHAPS, 800 mM urea, 1 mM dithiothreitol and 10% glycerol. The concentration, expressed as µg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-51469 was packaged aseptically in cryovials. The product is provided on ice bricks and should be stored at -20°C immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-51469 reacts with polyclonal anti-Lassa virus hyperimmune mouse ascitic fluid in western blot analysis.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Glycoprotein from Lassa Virus, ISTH-2018-014, Recombinant from Baculovirus, NR-51469."

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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Amanat, F., et al. "Antibodies to the Glycoprotein GP2 Subunit Cross-React between Old and New World Arenaviruses." *mSphere* 3 (2018): e00189. PubMed: 29720525.

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Figure 1 – Predicted Protein Sequence

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1  MGQIITFFQE VPHVIEEVMN IVLIALSLLA ILKGIYNVAT CGLFGLVSFL
51  LLCGRSCSTT YKGVYELQTL ELDMASLNMT MPLSCTKNNS HHYIMVGNET
101 GLELTLTNTS IINHFKCNLS DAHKKNLYDH ALMSIISTFH LSIPNFNQYE
151 AMSCDFNGGK ISVQYNLSHT YAVDAANHCG TIANGVLQTF MRMAWGGSYI
201 ALDSGKGSWD CIMTSYQYLI IQNTTWEDHC QFSRPSPIGY LGLLSQRTRD
251 IYISRLLGT FTWTLSDSEG NETPGGYCLT RWMLIEAELK CFGNTAVAKC
301 NEKHDEEFCD MLRLFDENKQ AIRRLKTEAQ MSIQLINKAV NALINDQLIM
351 KNHLRDIMGI PYCNYSKYWY LNHTVTGRTS LPRCWLVSNG SYLNETHFSD
401 DIEQQADNMI TELLQKEYIE RQGLVPRGSG YIPEAPRDGQ AYVRKDGWV
451 LLSTFLGGSH HHHHHHH

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GPC ectodomain – **Residues 1 to 423** (represents amino acid residues 1 to 423)

Thrombin cleavage site – Residues 424 to 429

T4 foldon trimerization domain – Residues 430 to 456

Plasmid-based residues – 457 to 459

Octa-histidine tag – Residues 460 to 467