

Vector pCAGGS Containing the Marburg Marburgvirus, Musoke Glycoprotein Gene with N-Terminal FLAG Tag

Catalog No. NR-49349

For research use only. Not for human use.

Contributor and Manufacturer:

Christopher F. Basler, Ph.D., Department of Microbiology, Icahn School of Medicine at Mount Sinai, One Gustave L. Levy Place, New York, New York, USA

Product Description:

The glycoprotein (GP) gene from Marburg marburgvirus (MARV), Musoke (GenBank: DQ217792) was directionally subcloned into a modified pCAGGS mammalian expression vector.¹ The resulting plasmid encodes a recombinant MARV GP containing a FLAG tag (DYKDDDDK) and three additional alanine residues at the amino terminus. The plasmid was produced in *Escherichia coli* and extracted.

GP is the sole filoviral protein expressed on the virion surface, is heavily N- and O-glycosylated, and is essential for virus infectivity.² It is a class I viral fusion protein that is cleaved by the host protease furin, and exists as a trimer of disulfide-linked GP₁ and GP₂ heterodimeric subunits. GP₁ contains the receptor-binding domain while GP₂ contains the transmembrane domain and mediates membrane fusion.^{3,4}

NR-49349 has been qualified for use in bacterial transformations.

Material Provided:

Each vial contains approximately 50 µL of plasmid DNA. The DNA concentration and content are shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-49349 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Vector pCAGGS Containing the Marburg Marburgvirus, Musoke Glycoprotein Gene with N-Terminal FLAG Tag, NR-49349."

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.

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 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 first commercial sale.

References:

1. Basler, C. F., Personal Communication.
2. Jasenosky, L. D., and Y. Kawoaka. "Filovirus Budding." *Virus Res.* 106 (2004): 181-188. PubMed: 15567496.
3. Volchkov, V. E., et al. "Proteolytic Processing of Marburg Virus Glycoprotein." *Virology* 268 (2000): 1-6. PubMed: 10683320.
4. Hunt, C. L., N. J. Lennemann, and W. Maury. "Filovirus Entry: A Novelty in the Viral Fusion World." *Viruses* 4 (2012): 258-275. PubMed: 22470835.

ATCC® is a trademark of the American Type Culture Collection.

