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

Catalog No. NR-49353

For research use only. Not for human use.

Contributor and Manufacturer:
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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 an HA tag (YPYDVPDYA) 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 GP_1 and GP_2 heterodimeric subunits. GP_1 contains the receptor-biding domain while GP_2 contains the transmembrane domain and mediates membrane fusion.[3,4]

NR-49353 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-49353 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 HA Tag, NR-49353."

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:
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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.

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