

Vector pCAGGS Containing the Zaire Ebola Virus, Mayinga VP40 Gene with N-Terminal HA Tag

Catalog No. NR-49400

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

The VP40 matrix protein gene from Zaire ebolavirus (EBOV), Mayinga (GenBank: [AF086833](#)) was directionally subcloned into a modified pCAGGS mammalian expression vector.¹ The resulting plasmid encodes a recombinant EBOV VP40 containing an HA tag (YPYDVPDYA) and three additional alanine residues at the amino terminus. The ampicillin resistance gene, *bla*, provides transformant selection through ampicillin resistance in *Escherichia coli* (*E. coli*). The resulting size of the plasmid is 6450 base pairs. The complete plasmid sequence is provided on the BEI Resources webpage. The plasmid was produced in *E. coli* and extracted.

VP40 is tightly associated with the inner leaflet of the virion membrane and drives filovirus budding.² Cells expressing both VP40 and a filovirus glycoprotein produce virus-like particles. Unlike the Marburg virus VP40, EBOV VP40 does not inhibit interferon signaling.³

NR-49400 has been qualified for use in bacterial transformations.

Material Provided:

Each vial contains plasmid DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 8.0). The DNA concentration and volume provided are shown on the Certificate of Analysis. The vial should be centrifuged prior to opening. **Note:** The contents of the vial should be used to replicate the plasmid in *E. coli* prior to expression studies.

Packaging/Storage:

NR-49400 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 Zaire Ebola Virus, Mayinga VP40 Gene with N-Terminal HA Tag, NR-49400.”

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 \(BMBL\)](#), 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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References:

- Basler, C. F., Personal Communication.
- Jasenosky, L. D., and Y. Kawoaka. “Filovirus Budding.” *Virus Res.* 106 (2004): 181-188. PubMed: 15567496.
- Valmas, C., et al. “Marburg Virus Evades Interferon Responses by a Mechanism Distinct from Ebola Virus.” *PLoS Pathog.* 6 (2010): e1000721. PubMed: 20084112.

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