Vector pcDNA3.1 Containing Zaire Ebolavirus Glycoprotein

Catalog No. NR-19814

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
The viral glycoprotein gene from Zaire ebolavirus (EBOV), was synthesized by multiple rounds of overlapping PCR based on the Zaire EBOV genome sequence (GenBank accession L11365) and subcloned into the Invitrogen™ vector pcDNA3.1.[1] NR-19814 is approximately 7830 base pairs and was produced in *Escherichia coli (E. coli)* and extracted.

293T cells co-transfected with NR-19814 and a β-lactamase-EBOV VP40 fusion protein (NR-19813) produce EBOV virus-like particles (VLPs). Fusion of these VLPs with target cells can be detected by monitoring β-lactamase activity using a fluorogenic substrate, permitting study of the cell entry steps of this highly pathogenic virus without the need for BSL-4 containment.[2]

NR-19814 has been qualified for use in bacterial transformations.

Material Provided:
Each vial contains approximately 100 µL of plasmid DNA in TE buffer (10 mM Tris-HCl and 0.5 mM EDTA, pH 8.0). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:
NR-19814 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Vector pcDNA3.1 Containing Zaire Ebolavirus Glycoprotein, NR-19814."

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.

Disclaimers:
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References:
1. Manicassamy, B., et al. "Comprehensive Analysis of Ebola Virus GP1 in Viral Entry." J. Virol. 79 (2005): 4793-4805. PubMed: 15795265.
2. Manicassamy, B., and Rong, L. "Expression of Ebolavirus Glycoprotein on the Target Cells Enhances Viral Entry." Virol. J. 6 (2009): 75. PubMed: 19505320.
3. Tscherne, D.M., et al. "An Enzymatic Virus-like Particle Assay for Sensitive Detection of Virus Entry." J. Virol. Methods 163 (2010): 336-343. PubMed: 19879300.

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