

Genomic DNA from Vaccinia Virus, Lister (Elstree)

Catalog No. NR-2635

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Contributor:

ATCC®

Manufacturer:

BEI Resources

Product Description:

Genomic DNA was isolated from a preparation of cell lysate and supernatant from African green monkey cells (Vero; ATCC® CCL-81™) infected with vaccinia virus, Lister (Elstree; BEI Resources NR-51).

Vaccinia virus, Lister (Elstree) was originally isolated from the skin of a sheep. The Lister (Elstree) strain was widely used during the World Health Organization program on the eradication of smallpox.¹ Although very effective, it induced rare but severe adverse effects. This was one of the reasons for the discontinuation of vaccination after eradication. The complete genomic sequence of vaccinia virus, Lister (Elstree) has been determined (GenBank: AY678276).²

NR-2635 has been qualified for PCR applications by amplification of an approximately 2,600 bp sequence. NR-2635 is not intended for use as a standard for quantitative PCR.

Material Provided:

Each vial contains a target amount of 1 X 10⁸ copies of viral genomic DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH 7.5) containing sodium azide. The actual number of copies per vial may vary from 10-fold lower to 10-fold higher. The number of copies per vial and the concentration are shown on the Certificate of Analysis. The viral genomic DNA is in a background of cellular nucleic acid and carrier RNA. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-2635 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: Genomic DNA from Vaccinia Virus, Lister (Elstree), NR-2635.”

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/bmb15/index.htm.

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References:

1. Ober, B. T., et al. “Immunogenicity and Safety of Defective Vaccinia Virus Lister: Comparison with Modified Vaccinia Virus Ankara.” J. Virol. 76 (2002): 7713-7723. PubMed: 12097585.
2. Morikawa, S. et al. “An Attenuated LC16m8 Smallpox Vaccine: Analysis of Full-Genome Sequence and Induction of Immune Protection.” J. Virol. 79 (2005): 11873-11891. PubMed: 16140764. GenBank: AY678276.

3. Hsieh, S. M., et al. "Clinical and Immunological Responses to Undiluted and Diluted Smallpox Vaccine with Vaccinia Virus of Lister Strain." *Vaccine* 24 (2006): 510-515. PubMed: 16139395.
4. Auckland, C., A. Cowlishaw, D. Morgan, and E. Miller. "Reactions to Small Pox Vaccine in Naive and Previously-Vaccinated Individuals." *Vaccine* 23 (2005): 4185-4187. PubMed: 15916840.
5. Takahashi, F., et al. "Genetic Analysis of Vaccinia Virus Lister Strain and Its Attenuated Mutant LC16m8: Production of Intermediate Variants by Homologous Recombination." *J. Gen. Virol.* 68 (1987): 2705-2710. PubMed: 3668510.

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