

Certificate of Analysis for NR-1

Vaccinia Virus, Modified Vaccinia Ankara (MVA)

Catalog No. NR-1

Product Description:

NR-1 lot 7704329 was produced by infecting chicken embryo fibroblast (SL-29 CEF; ATCC[®] CRL-1590™) cells with VACV, MVA and incubating in Dulbecco's Modified Eagle's Medium supplemented with 5% fetal bovine serum and 5% tryptose phosphate broth for 2 days at 37°C with 5% CO₂.

Passage History:

Unknown/CEF(1) (prior to deposit/BEI Resources) CEF = Chicken Embryo Fibroblast cells¹

Lot: 7704329 Manufacturing Date: 02DEC2006

| TEST | SPECIFICATIONS | RESULTS |
|---|-------------------------------------|---|
| Identification by Infectivity in CEF Cells | Cell rounding and detachment | Cell rounding and detachment |
| Sequencing of Species-Specific Region | Consistent with Vaccinia virus, MVA | Consistent with Vaccinia virus, MVA |
| Titer by TCID ₅₀ Assay in CEF Cells by Cytopathic Effect ² (10 days at 37°C with 5% CO ₂) | Report results | 8.9 × 10 ⁶ TCID ₅₀ /mL ³ |
| Sterility (21-day incubation) | | |
| Harpo's HTYE broth, 37°C and 26°C, aerobic ⁴ | No growth | No growth |
| Trypticase Soy broth, 37°C and 26°C, aerobic | No growth | No growth |
| Sabouraud broth, 37°C and 26°C, aerobic | No growth | No growth |
| Sheep blood agar, 37°C, aerobic | No growth | No growth |
| Sheep blood agar, 37°C, anaerobic | No growth | No growth |
| Thioglycollate broth, 37°C, anaerobic | No growth | No growth |
| DMEM with 10% FBS, 37°C, aerobic | No growth | No growth |
| Mycoplasma Contamination | | |
| Agar and broth culture (14-day incubation at 37°C) | None detected | None detected |
| DNA detection by PCR of extracted Test Article nucleic acid | None detected | None detected |

¹Mayr, A., V. Hochstein-Mintzel, and H. Stickl. "Passage History, Properties, and Applicability of the Attenuated Vaccinia Virus Strain MVA." <u>Infection</u> 3 (1975): 6-14.

/Sonia Bjorum Brower/ Sonia Biorum Brower

21 APR 2023

Technical Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

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²The Tissue Culture Infectious Dose 50% (TCID₅₀) endpoint is the 50% infectious endpoint in cell culture. The TCID₅₀ is the dilution of virus that under the conditions of the assay can be expected to infect 50% of the culture vessels inoculated, just as a Lethal Dose 50% (LD₅₀) is expected to kill half of the animals exposed. A reciprocal of the dilution required to yield the TCID₅₀ provides a measure of the titer (or infectivity) of a virus preparation. ³Titer verified 20MAR2023

⁴Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.