

Certificate of Analysis for NR-51

Vaccinia Virus, Lister (Elstree)

Catalog No. NR-51

(Derived from ATCC® VR-1549™)

Product Description: Cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells (Vero)¹ infected with vaccinia virus (VACV), Lister (Elstree)

Lot²: 62160909

Manufacturing Date: 01NOV2013

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity Using Vero Cells ¹	Report results	Rounding and detachment
Sequencing of Strain-Specific Region (~ 1000 nucleotides)	Consistent with VACV, Lister	99% identity with VACV, Lister (GenBank: AY678276)
Titer by TCID ₅₀ Assay ^{3,4} in Vero Cells ¹	Report results	2.8 × 10 ⁶ TCID ₅₀ per mL
Sterility (21-day incubation) Harpo's HTYE broth ⁵ , 37°C and 26°C, aerobic Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Sheep blood agar, 37°C, aerobic Sheep blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic DMEM with 10% FBS, 37°C and 5% CO ₂	No growth No growth No growth No growth No growth No growth No growth	No growth No growth No growth No growth No growth No growth No growth
Mycoplasma Contamination Agar and broth culture (14-day incubation at 37°C) DNA detection by PCR of extracted Test Article nucleic acid	None detected None detected	None detected None detected

¹Vero cells: ATCC® CCL-81™

²Grown in Eagle's Minimum Essential Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1.5 g/L of sodium bicarbonate (ATCC® 30-2003) supplemented with 2% fetal bovine serum (ATCC® 30-2020) for 3 days at 37°C with 5% CO₂.

³The 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.

⁴7 days at 37°C and 5% CO₂ with media overlay

⁵Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.

Date: 24 MAR 2014

Signature:



Title:

Technical Manager, BEI Authentication or designee

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