

Certificate of Analysis for NR-51184

Usutu Virus, SAAR 1776

Catalog No. NR-51184

Product Description: Usutu virus (USUV), SAAR 1776 was isolated from a mosquito (*Culex univittatus*) in Ndumo, Natal, South Africa in January 1959. Each vial contains cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells¹ infected with USUV, SAAR 1776.

Passage History: SM7V1/V2 (Prior to deposit at BEI Resources/BEI Resources); SM = Suckling mice; V = Vero cells¹

Lot²: 70014388 Manufacturing Date: 09MAY2018

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero cells	Cell rounding and detachment	Cell rounding and detachment
Sequencing of Species-Specific Region (~ 990 nucleotides)	≥ 98% identity with USUV, SAAR 1776 (GenBank: MF374485.1)	100% identity with USUV, SAAR 1776 (GenBank: MF374485.1)
Titer by TCID ₅₀ Assay ^{3,4} in Vero cells¹ by Cytopathic Effect	Report results	1.6 × 10 ⁸ TCID ₅₀ per mL
Amplification of USUV Sequence by RT-PCR	~ 1100 base pair amplicon	~ 1100 base pair amplicon
Sterility (21-day incubation)		
Harpo's HTYE broth ⁵ , 37°C and 26°C, aerobic	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
Blood agar, 37°C, aerobic	No growth	No growth
Blood agar, 37°C, anaerobic	No growth	No growth
Thioglycollate broth, 37°C, anaerobic	No growth	No growth
DMEM with 10% FBS, 37°C and 5% CO ₂	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

¹Vero: ATCC[®] CCL-81™

/Heather Couch/

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Program Manager or designee, ATCC Federal Solutions

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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 5 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.

⁴10 days at 37°C and 5% CO₂

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