

Certificate of Analysis for NR-51185

Usutu Virus, ENT MP 1626

Catalog No. NR-51185

Product Description: Usutu virus (USUV), ENT MP 1626 was isolated from a mosquito (Mansonia aurites) pool in Zika Forest, Entebbe, Uganda in October 1962. Vial contains cell lysate and supernatant from Cercopithecus aethiops kidney epithelial cells1 infected with USUV, ENT MP 1626.

Passage History: SM5V1/V2 (Prior to deposit at BEI Resources/BEI Resources); SM = Suckling mice; V = Vero E6 cells1

Lot²: 70014222 Manufacturing Date: 23MAY2018

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero E6 cells	Cell rounding and sloughing	Cell rounding and sloughing
Sequencing of Species-Specific Region (~ 940 nucleotides)	Consistent with USUV	Consistent with USUV ³
Titer by TCID ₅₀ Assay ^{4,5} in Vero E6 cells ¹ by Cytopathic Effect	Report results	1.6 x 10 ⁷ TCID ₅₀ per mL
Amplification of USUV Sequence by RT-PCR	~ 1110 base pair amplicon	~ 1110 base pair amplicon
Sterility (21-day incubation) Harpo's HTYE broth ⁶ , 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
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 E6: ATCC® CRL-1586™

/Heather Couch/

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Program 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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BEI Resources

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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 8 days at

³Sequence information for USUV, ENT MP 1626 is not available in the NCBI database; nucleotide sequence obtained for NR-51185 lot 70014222 is 98% identical to Usutu virus isolate ArD19848, complete genome (GenBank: KC754954.1).

⁴The 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.

⁵7 days at 37°C and 5% CO₂

⁶Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.