

Dengue Virus Type 1 (DEN-1), Hawaii

Catalog No. NR-82

Derived from ATCC® VR-1254™

Product Description: Dengue virus type 1 (DEN-1), Hawaii was isolated in 1944 from the pooled serum of six patients in Hawaii.

Lot^{1,2}: 70018416

Manufacturing Date: 26SEP2018

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero Cells ¹	Report results	Cell rounding and sloughing
Identification by Indirect Fluorescent Antibody (IFA) Assay ³	Fluorescence observed	Fluorescence observed
Sequencing of Species-Specific Region (~ 860 nucleotides)	≥ 98% identity with DEN-1, Hawaii (GenBank: KM204119)	99.3% identity with DEN-1, Hawaii (GenBank: KM204119)
Titer by TCID ₅₀ Assay ^{4,5} in Vero Cells ¹ with IFA Readout ³	Report results	2.8 × 10 ⁷ TCID ₅₀ per mL
Amplification of Dengue Virus Sequence by RT-PCR	~ 1000 base pair amplicon	~ 1000 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 Blood agar, 37°C, aerobic 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

¹*Cercopithecus aethiops* kidney epithelial cells (Vero; ATCC® CCL-81™)

²Lot 70018416 of NR-82 was produced by infecting Vero cells¹ with BEI Resources NRS-82 lot 57806399 and incubating 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 14 days at 33°C with 5% CO₂.

³Using Anti-Dengue Virus Type I Antibody (Millipore MAB8701)

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.

⁵Assay plates were incubated 14 days at 33°C and 5% CO₂

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

/Heather Couch/

Heather Couch

21 JAN 2019

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.

ATCC® is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

