

Certificate of Analysis for NR-80

Dengue Virus Type 3 (DEN-3), Philippines/H87/1956

Catalog No. NR-80

Derived from ATCC® VR-1256 (V-576-001-022)

Product Description: Cell lysate and supernatant from African green monkey (Vero) cells¹ infected with DEN-3, Philippines/H87/1956.²

Lot³: 5514033 Manufacturing Date: 14APR2006

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero Cells ¹	Report results	Cell rounding and detachment
Identification by Indirect Fluorescent Antibody Assay ⁴	Fluorescence observed	Fluorescence observed
Sequencing of DEN-3 Specific Sequence (~ 130 bp)	Identical to GenBank M93130 (DEN-3, Philippines/H87/1956)	Identical to GenBank M93130 (DEN-3, Philippines/H87/1956) ⁵
Titer by TCID ₅₀ Assay ^{6,7} in Vero Cells ¹	Report results	8.9 x 10 ⁵ TCID ₅₀ per mL
Amplification of Dengue Virus Sequence by RT-PCR	~ 170 bp amplicon	~ 170 bp amplicon
Sterility (21-day incubation) Harpo's HTYE broth ⁸ , 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 Test Article nucleic acid	None detected None detected	None detected None detected

¹Vero cells: ATCC[®] CCL-81™

Date: 09 SEP 2016

Signature:

BEI Resources Authentication

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 inoculum for NR-80 was ATCC® VR-1256 (NIAID Cat. No. V-576-001-022).

³Grown in Minimum Essential Medium containing Earle's salts and non-essential amino acids (Invitrogen™ 10370-021) supplemented with 2% irradiated fetal bovine serum (Cambrex® 14-471F), 2 mM L-glutamine (Invitrogen™ 25030-081), and 1 mM sodium pyruvate (Invitrogen™ 11360-070) for 7 days at 37°C and 5% CO₂.

⁴Using monoclonal antibody specific to DEN-3 (Chemicon MAB8703).

⁵Also consistent with DEN-3, 80-2.

⁶The 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.

⁷7 days at 37°C and 5% CO₂.

⁸Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798