

SARS-Related Coronavirus 2, Isolate USA-WA1/2020

Catalog No. NR-52281

Product Description:

Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate USA-WA1/2020 was isolated from an oropharyngeal swab from a patient with a respiratory illness who had recently returned from travel to the affected region of China and developed clinical disease (COVID-19) in January 2020 in Washington, USA. **Deposited and labeled as 2019 Novel Coronavirus (2019 nCoV) prior to the determination of the official name.** NR-52281 lot 70033175 was produced by infecting *Cercopithecus aethiops* kidney cells (Vero E6; ATCC® CRL-1586™) with the deposited material in Eagle's Minimum Essential Medium (ATCC® 30-2003) supplemented with 2% fetal bovine serum (ATCC® 30-2020) and 100 µg/mL Penicillin/Streptomycin solution and 2.5 µg/mL Amphotericin B for 2 days at 37°C with 5% CO₂.

Passage history:

V(3)/VE6(1) (CDC/BEI Resources); V = Vero cells; VE6 = Vero E6 cells

Lot: 70033175

Manufacturing Date: 07FEB2020

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero E6 cells	Cell rounding and detachment	Cell rounding and detachment
Sequencing of Species-Specific Region (~ 940 nucleotides)	≥ 98% identity with SARS-CoV-2, isolate USA-WA1/2020 (GenBank: MN985325.1)	100% identity with SARS-CoV-2, isolate USA-WA1/2020 (GenBank: MN985325.1)
(~ 940 nucleotides)	≥ 98% identity with SARS-CoV-2, strain FDAARGOS_983 isolate USA-WA1/2020 (GenBank: MT246667.1)	100% identity with SARS-CoV-2, strain FDAARGOS_983 isolate USA-WA1/2020 (GenBank: MT246667.1)
Genome Copy Number Using BioRad QX200 Droplet Digital PCR (ddPCR™) System (Post vial; 6 replicates)	Report results	2.07 × 10 ⁹ genome equivalents per mL
Titer by TCID₅₀ Assay in Vero E6 cells by Cytopathic Effect¹	Report results	2.8 × 10 ⁵ TCID ₅₀ per mL in 6 days at 37°C and 5% CO ₂
Sterility (21-day incubation) Harpo's HTYE broth, 37°C and 26°C, aerobic ² 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

¹The 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.

²Atlas, Ronald M. *Handbook of Microbiological Media*. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.

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