

SARS-Related Coronavirus 2, Isolate New York 1-PV08001/2020

Catalog No. NR-52368

Product Description:

Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate New York 1-PV08001/2020 was isolated from a nasal swab collected on 29 February, 2020 from a patient with a respiratory illness who had recently returned from travel to Iran and developed clinical disease (COVID-19) in February 2020 in New York, USA. NR-52368 lot 70034435 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) for 3 days at 37°C with 5% CO₂.

Passage History:

VE(1)/VE6(2) (The Icahn School of Medicine at Mount Sinai Medical School/BEI Resources); VE6 = Vero E6 cells

Lot: 70034435

Manufacturing Date: 22JUN2020

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero E6 Cells	Cell rounding and detachment	Cell rounding and detachment
Next-Generation Sequencing (NGS) of Complete Genome Using Illumina® iSeq™ 100 Platform (Refer to Appendix I for NGS information)	≥ 98% identity with SARS-CoV-2, isolate NY1-PV08001/2020 (GenBank: MT370904.1 and GISAID: EPI_ISL_414476)	≥ 99.99% identity with SARS-CoV-2, isolate NY1-PV08001/2020 (GenBank: MT370904.1 and GISAID: EPI_ISL_414476)
Titer by TCID₅₀ Assay in Vero E6 Cells by Cytopathic Effect¹ (5 days at 37°C and 5% CO ₂)	Report results	2.8 × 10 ⁵ TCID ₅₀ per mL
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, aerobic	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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01 SEP 2020

Program Manager or designee, ATCC Federal Solutions

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APPENDIX I: NGS Information for NR-52368 lot 70034435

Sequence analysis resulted in the discovery of two SNPs when compared to the reference sequence from GISAID EPI_ISL_414476. Additionally, both the reference sequence GISAID EPI_ISL_414476 and NR-52368_70034435 contained nine SNPs when compared to GenBank MN908947 (SARS-CoV-2, isolate Wuhan-Hu-1, complete genome) (see Table below). Quality scores over 60 indicate it is improbable that the variant call is incorrect.

Position in NR-52368_70034435 Sequence	Position in EPI_ISL_414476 Reference Sequence	Position in MN908947 Wuhan-Hu-1 Sequence	Reported MN908947 Wuhan-Hu-1 Sequence	Reported EPI_ISL_414476 Reference Sequence	Identified Alternative Base	Quality	Variant Type	Length of Variant	Frequency of Variant
1366	1387	1397	G	A	A	n/a	SNP	1	1.0000000
3221	3242	3242	G	A	A	n/a	SNP	1	1.0000000
9493	9514	9514	A	G	G	n/a	SNP	1	1.0000000
10231	10252	10252	C	C	T	222	SNP	1	0.4095238
11062	11083	11083	G	T	T	n/a	SNP	1	1.0000000
23585	23606	23606	C	C	T	222	SNP	1	0.4020270
25193	25214	25214	C	T	T	n/a	SNP	1	1.0000000
27636	27657	27657	C	N	T	n/a	SNP	1	1.0000000
28667	28688	28688	T	C	C	n/a	SNP	1	1.0000000
29006	29027	29027	G	T	T	n/a	SNP	1	1.0000000
29721	29742	29742	G	T	T	n/a	SNP	1	1.0000000