

SARS-Related Coronavirus 2, Isolate New York-PV09197/2020

Catalog No. NR-53517

Product Description:

Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate New York-PV09197/2020 was isolated on March 20, 2020 from a nasal swab collected from a patient with a fatal respiratory illness in New York, USA. NR-53517 lot 70036352 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 4 days at 37°C with 5% CO₂.

Passage History:

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

Lot: 70036352

Manufacturing Date: 23JUN2020

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 NY-PV09197/2020 (GenBank: MT370988.1 and GISAID: EPI_ISL_422552)	99.99% identity with SARS-CoV-2, isolate NY-PV09197/2020 (GenBank: MT370988.1 and GISAID: EPI_ISL_422552)
Titer by TCID₅₀ Assay in Vero E6 Cells by Cytopathic Effect¹ (5 days at 37°C and 5% CO ₂)	Report results	8.9 × 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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19 AUG 2020

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APPENDIX I: NGS Information for NR-53517 lot 70036352

Sequence analysis resulted in the discovery of three SNPs when compared to the reference sequence from GISAID EPI_ISL_422552. Additionally, both the reference sequence GISAID EPI_ISL_422552 and NR-53517_70036352 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-53517_70036352 Sequence	Position in EPI_ISL_422552 Reference Sequence	Position in MN908947 Wuhan-Hu-1 Sequence	Reported MN908947 Wuhan-Hu-1 Sequence	Reported EPI_ISL_422552 Reference Sequence	Identified Alternative Base	Quality	Variant Type	Length of Variant	Frequency of Variant
186	186	241	C	T	T	n/a	SNP	1	1.0000000
1004	1004	1059	C	T	T	n/a	SNP	1	1.0000000
2982	2982	3037	C	T	T	n/a	SNP	1	1.0000000
11861	11861	11916	C	T	T	n/a	SNP	1	1.0000000
14353	14353	14408	C	T	T	n/a	SNP	1	1.0000000
18943	18943	18998	C	T	T	n/a	SNP	1	1.0000000
21951	21951	22006	C	C	A	222	SNP	1	0.5795455
22158	22158	22213	T	T	C	222	SNP	1	0.6200000
22170	22170	22225	G	A	G	222	SNP	1	0.6086957
23348	23348	23403	A	G	G	n/a	SNP	1	1.0000000
25508	25508	25563	G	T	T	n/a	SNP	1	1.0000000
29485	29485	29540	G	A	A	n/a	SNP	1	1.0000000