

**SARS-Related Coronavirus 2, Isolate USA-CA1/2020**

**Catalog No. NR-52382**

**Product Description:**

Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate USA-CA1/2020 was isolated from a nasopharyngeal swab from a human patient in California, USA on January 23, 2020. NR-52382 lot 70034877 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% CO<sub>2</sub>.

**Passage History:**

V(2)/VE6(3) (Centers for Disease Control and Prevention/BEI Resources); V = Vero cells; VE6 = Vero E6 cells

**Lot: 70034877**

**Manufacturing Date: 18MAY2020**

TEST	SPECIFICATIONS	RESULTS
<b>Identification by Infectivity in Vero E6 Cells</b>	Cell rounding and detachment	Cell rounding and detachment
<b>Next-Generation Sequencing (NGS) of Complete Genome Using Illumina® iSeq™ 100 Platform</b> (Refer to Appendix I for NGS information)	≥ 98% identity with SARS-CoV-2, isolate USA-CA1/2020 (GenBank: MN994467.1)	99.9% identity with SARS-CoV-2, isolate USA-CA1/2020 (GenBank: MN994467.1)
<b>Titer by TCID<sub>50</sub> Assay in Vero E6 Cells by Cytopathic Effect<sup>1</sup></b> (5 days at 37°C and 5% CO <sub>2</sub> )	Report results	2.8 × 10 <sup>5</sup> TCID <sub>50</sub> per mL
<b>Sterility (21-day incubation)</b> Harpo's HTYE broth, 37°C and 26°C, aerobic <sup>2</sup> 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
<b>Mycoplasma Contamination</b> 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

<sup>1</sup>The Tissue Culture Infectious Dose 50% (TCID<sub>50</sub>) endpoint is the 50% infectious endpoint in cell culture. The TCID<sub>50</sub> 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% (LD<sub>50</sub>) is expected to kill half of the animals exposed. A reciprocal of the dilution required to yield the TCID<sub>50</sub> provides a measure of the titer (or infectivity) of a virus preparation.

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

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**APPENDIX I: NGS Information for NR-52382 lot 70034877**

Sequence analysis resulted in the discovery of one SNP and two deletions when compared to GenBank MN994467.1 (see Table below). Quality scores over 60 indicate it is improbable that the variant call is incorrect.

Position in NR-52382_70034877 Sequence	Position in MN994467.1	Reported MN994467.1 Sequence	Identified Alternative Base	Quality	Variant Type	Length of Variant	Frequency of Variant
495	507	ATGGTCATGTT ATGGTTG	ATG	228	Indel	15	0.8965517
21772	21799	T	A	225	SNP	1	1.0000000
23555	23582	TATCAGACTCA GACTAAT	TAT	222	Indel	15	0.6134454