

**SARS-Related Coronavirus 2, Isolate Chile/Santiago\_op4d1/2020**

**Catalog No. NR-52439**

**Product Description:**

Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate Chile/Santiago\_op4d1/2020 was isolated from a nasal swab from a young adult male in a family with European travel history on March 8, 2020 in Santiago, Chile. NR-52439 lot 70035562 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% CO<sub>2</sub>.

**Passage History:**

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

**Lot: 70035562**

**Manufacturing Date: 15JUN2020**

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	≥ 98% identity with SARS-CoV-2 <sup>1</sup>
<b>Titer by TCID<sub>50</sub> Assay in Vero E6 Cells by Cytopathic Effect<sup>2</sup></b> (7 days at 37°C and 5% CO <sub>2</sub> )	Report results	8.9 × 10 <sup>6</sup> TCID <sub>50</sub> per mL
<b>Sterility (21-day incubation)</b> Harpo's HTYE broth, 37°C and 26°C, aerobic <sup>3</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>Sequence information for SARS-CoV-2, isolate Chile/Santiago\_op4d1/2020 is not available in the NCBI database; nucleotide sequence obtained for NR-52439 lot 70035562 is 99.96% identical to SARS-CoV-2, isolate Wuhan-Hu-1, complete genome (GenBank: MN908947.3) and consistent with numerous SARS-CoV-2 strains.

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

/Heather Couch/  
Heather Couch

02 OCT 2020

Program Manager or designee, ATCC Federal Solutions

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.

ATCC® is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.



**APPENDIX I: NGS Information for NR-52439 lot 70035562**

Sequence analysis resulted in the discovery of four SNPs when compared to the reference sequence from GISAID EPI\_ISL\_415661. Additionally, both the reference sequence GISAID EPI\_ISL\_415661 and NR-52439\_70035562 contained seven 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-52439_70035562 Sequence	Position in EPI_ISL_415661 Reference Sequence	Position in MN908947 Sequence	Reported MN908947 Sequence	Reported EPI_ISL_415661 Reference Sequence	Identified Alternative Base	Quality	Variant Type	Length of Variant	Frequency of Variant
8727	8727	8782	C	T	T	n/a	SNP	1	1.0000000
9422	9422	9477	T	A	A	n/a	SNP	1	1.0000000
10590	10590	10645	C	C	T	228	SNP	1	0.9773371
14750	14750	14805	C	T	T	n/a	SNP	1	1.0000000
22062	22062	22117	T	T	G	221	SNP	1	0.2745826
22241	22241	22296	A	A	G	221	SNP	1	0.2822384
23561	23561	23616	G	G	A	228	SNP	1	0.9888211
25924	25924	25979	G	T	T	n/a	SNP	1	1.0000000
23089	23089	28144	T	C	C	n/a	SNP	1	1.0000000
28602	28602	28657	C	T	T	n/a	SNP	1	1.0000000
28808	28808	28863	C	T	T	n/a	SNP	1	1.0000000