

**Genomic RNA from SARS-Related Coronavirus 2, Isolate USA-WI1/2020**

**Catalog No. NR-52506**

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**Product Description:**

Genomic RNA was extracted from a preparation of cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells (Vero E6; ATCC® CRL-1586™) infected with severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate USA-WI1/2020 (BEI Resources NR-52384 lot 70034881), using QIAamp® Viral RNA Mini Kit (Qiagen 52904). The viral genomic RNA is in a background of cellular nucleic acid and carrier RNA.

**Lot: 70035257**

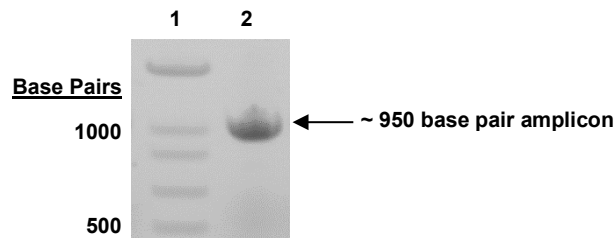
**Manufacturing Date: 28MAY2020**

TEST	SPECIFICATIONS	RESULTS
<b>Sequencing of Species-Specific Region</b> (~ 870 nucleotides)	≥ 98% identity with SARS-CoV-2, isolate USA-WI1/2020 (GenBank: MT039887.1)	100% identity with SARS-CoV-2, isolate USA-WI1/2020 (GenBank: MT039887.1)
<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-WI1/2020 (GenBank: MT039887.1)	99.96% identity with SARS-CoV-2, isolate USA-WI1/2020 (GenBank: MT039887.1)
<b>Functional Activity by RT-PCR Amplification<sup>1</sup></b>	~ 950 base pair amplicon	~ 950 base pair amplicon (Figure 1)
<b>Genome Copy Number Using BioRad QX200 Droplet Digital PCR (ddPCR™) System</b> (Post vial; 9 replicates)	Report results	7.5 × 10 <sup>7</sup> genome equivalents/mL
<b>Virus Inactivation (14 Days, 2 Passages)</b> 10% of total yield inoculated on Vero E6 cells and evaluated for cytopathic effect <sup>2</sup> Passage 1 Passage 2	No viable virus detected No viable virus detected	No viable virus detected No viable virus detected
<b>Virus Inactivation (14 Days, 2 Passages)</b> 100% of total yield inoculated on Vero E6 cells and evaluated for cytopathic effect <sup>2</sup> Passage 1 Passage 2	No viable virus detected No viable virus detected	No viable virus detected No viable virus detected

<sup>1</sup>Amplified using iTaq™ Universal SYBR Green One-step Kit (Bio-Rad 172-5151) with 5 µL of NR-52506 in a 50 µL reaction

<sup>2</sup>Supernatant was tested by qPCR to confirm absence of CPE and no evidence of replicative RNA was detected. Samples from both passages were tested by qPCR at the end of day 14 of the passages.

**Figure 1: Functional Activity of NR-52506 by RT-PCR Amplification**



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder  
Lane 2: PCR product from 1 µL of NR-52506

/Heather Couch/

Heather Couch

04 SEP 2020

Program Manager or designee, ATCC Federal Solutions

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**APPENDIX I: NGS Information for NR-52506 lot 70035257**

Sequence analysis resulted in the discovery of two SNPs and a single deletion when compared to GenBank MT039887.1 (see Table below). Quality scores over 60 indicate it is improbable that the variant call is incorrect.

Position in NR-52506_70035257 Sequence	Position in MT039887.1	Reported MT039887.1 Sequence	Identified Alternative Base	Quality	Variant Type	Length of Variant	Frequency of Variant
11831	11835	C	T	225	SNP	1	1.0000000
22199	22203	A	G	228	SNP	1	0.9327731
23609	23613	GTAGTGTAGCTAGT	GTAGT	222	Indel	9	0.5271967