

**Genomic RNA from SARS-Related Coronavirus 2, Isolate hCoV-19/USA/MD-HP01542/2021 (Lineage B.1.351)**

**Catalog No. NR-55349**

**Product Description:**

Genomic RNA was isolated from a preparation of cell lysate and supernatant from *Homo sapiens* lung adenocarcinoma cells (Calu-3; ATCC® HTB-55™) infected with SARS-CoV-2, isolate hCoV-19/USA/MD-HP01542/2021 (BEI Resources NRC-55282 lot 70043444) using QIAamp® Viral RNA Mini Kit (Qiagen® 52906). The viral genomic RNA is in a background of cellular nucleic acid and carrier RNA.

**Lot: 70045171**

**Manufacturing Date: 01JUN2021**

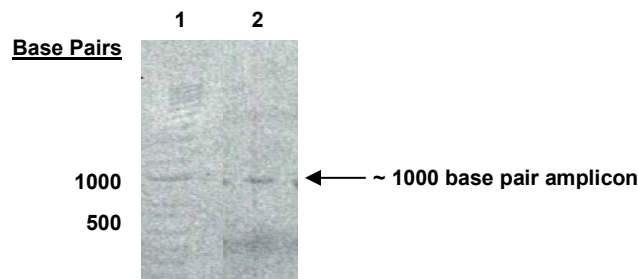
TEST	SPECIFICATIONS	RESULTS
<b>Genotypic Analysis</b> Sequencing of species-specific region (~ 840 nucleotides)	≥ 98% identity with SARS-CoV-2, hCoV-19/USA/MD-HP01542/2021 (GISAID: EPI_ISL_890360)	100% identity with SARS-CoV-2, hCoV-19/USA/MD-HP01542/2021 (GISAID: EPI_ISL_890360)
<b>Functional Activity by RT-PCR Amplification<sup>1</sup></b> ORF1ab	~ 950 base pair amplicon	~ 1000 base pair amplicon (Figure 1)
<b>Estimated Concentration (post-dilution) by Qubit® Measurement (Viral, Cellular and Carrier)<sup>2</sup></b>	Report results	0.5 ng per 100 µL (0.0046 µg per mL)
<b>Estimated Amount per Vial<sup>3</sup></b>	Report results	0.5 ng
<b>Genome Copy Number Using BioRad QX200 Droplet Digital PCR (ddPCR™) System</b> (Post vial; 18 replicates)	Report results	7.8 × 10 <sup>5</sup> genome copies per mL
<b>Virus Inactivation</b> 10% of total yield inoculated on Calu-3 cells and evaluated for cytopathic effect and by RT-PCR after serial passage	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-55349 in a 50 µL reaction

<sup>2</sup>Measurement is determined pre-vial prior to dilution due to the limit of detection of the quantification method

<sup>3</sup>Use of the QIAamp® Viral RNA Mini Kit has been demonstrated to consistently inactivate 100% of SARS-CoV-2 as shown by the absence of cytopathic effect (CPE) and viral RNA expression by RT-PCR after plating the entire extract on virus-susceptible cells for two passages.

**Figure 1: Functional Activity of NR-55349 by RT-PCR Amplification**



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder  
Lane 2: PCR product from 1 µL of NR-55349

/Sonia Bjorum Brower/

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02 AUG 2022

Technical Manager or designee, ATCC Federal Solutions

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