

**SARS-Related Coronavirus 2, Isolate hCoV-19/USA/OR-OHSU-PHL00037/2021 (Lineage B.1.1.7; Alpha Variant)**

**Catalog No. NR-55461**

**For research use only. Not for use in humans.**

**Contributor:**

Centers for Disease Control and Prevention, Atlanta, Georgia, USA

**Manufacturer:**

BEI Resources

**Product Description:**

Virus Classification: *Coronaviridae, Betacoronavirus*

Species: Severe acute respiratory syndrome-related coronavirus 2

Strain/Isolate: hCoV-19/USA/OR-OHSU-PHL00037/2021<sup>1,2</sup>

Original Source: Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate hCoV-19/USA/OR-OHSU-PHL00037/2021 was isolated from a nasopharyngeal swab on February 6, 2021 in Marion County, Oregon, USA.<sup>1,2</sup>

**Note: Genome sequence information is provided on the Certificate of Analysis and includes an analysis of all sequence variations observed for each lot.**

Comments: Under the nomenclature system introduced by GISAID (Global Initiative on Sharing All Influenza Data), SARS-CoV-2, isolate hCoV-19/USA/OR-OHSU-PHL00037/2021 is assigned lineage B.1.1.7 and GISAID clade GRY using Phylogenetic Assignment of Named Global Outbreak LINEages (PANGOLIN) tool.<sup>2,3,4</sup> The complete genome of the clinical isolate of SARS-CoV-2, hCoV-19/USA/OR-OHSU-PHL00037/2021 has been sequenced (GISAID: EPI\_ISL\_1055380).<sup>2,3</sup> The following mutations are present in the clinical isolate: Spike A570D, Spike D614G, Spike D1118H, Spike E484K, Spike H69del, Spike N501Y, Spike P681H, Spike S982A, Spike T716I, Spike V70del, Spike Y144del, N (Nucleocapsid protein) D3L, N G204R, N G236V, N R203K, N S235F, ORF8 K68stop, ORF8 Q27stop, ORF8 R52I, ORF8 Y73C, NSP2 (Non-structural protein 2) V323I, NSP3 (Non-structural protein 3) A890D, NSP3 I1412T, NSP3 T183I, NSP6 (Non-structural protein 6) F108del, NSP6 G107del, NSP6 S106del, NSP12 (Non-structural protein 12) P227L, NSP12 P323L, NSP14 (Non-structural protein 14) P451S.<sup>2,3</sup> SARS-CoV-2, lineage B.1.1.7 was first detected in the United Kingdom and labelled as a variant of concern (VOC) 202012/01 GRY (B.1.1.7).<sup>2,5</sup> It was labelled as Alpha variant by the World Health Organization (WHO).<sup>5</sup>

In December 2019, an outbreak of a respiratory illness (COVID-19) began in Wuhan, Hubei Province, China. The outbreak is associated with a seafood market and although environmental samples from the market are positive for the

novel coronavirus, an association with a particular animal has not been determined.<sup>6</sup> SARS-CoV-2 has been isolated from patients from several countries and the sequences of some of these isolates have been deposited with GISAID.

**Material Provided:**

Each vial contains approximately 0.1 mL of spin-clarified cell lysate and supernatant from *Homo sapiens* lung adenocarcinoma epithelial cells infected with SARS-CoV-2, isolate hCoV-19/USA/OR-OHSU-PHL00037/2021.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**

NR-55461 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

Host: *Homo sapiens* lung adenocarcinoma epithelial cells (Calu-3; ATCC® HTB-55™)

Growth Medium: Eagle's Minimum Essential Medium containing Earle's Balanced Salt Solution, non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate and 1.5 g per L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent

Infection: Cells should be 70% to 90% confluent

Incubation: 3 to 5 days at 37°C and 5% CO<sub>2</sub>

Cytopathic Effect: Cell rounding and sloughing

**Citation:**

Acknowledgment for publications should read "The following reagent was deposited by the Centers for Disease Control and Prevention and obtained through BEI Resources, NIAID, NIH: SARS-Related Coronavirus 2, Isolate hCoV-19/USA/OR-OHSU-PHL00037/2021 (Lineage B.1.1.7; Alpha Variant), NR-55461."

**Biosafety Level: 3**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

**Disclaimers:**

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**Use Restrictions:**

SARS-CoV-2 materials provided by BEI Resources under the EUSLA are made available for any legitimate purpose, including commercial purposes as long as they are to rapidly prevent, detect, prepare for, and respond to, the spread or transmission of the 2019 SARS-CoV-2. Any further transfer of the original material or any unmodified progeny must be done under the terms of the EUSLA, documented as described above and you must notify BEI Resources of each subsequent transfer. Any new materials made by you that are not the original material or unmodified progeny are excluded from this requirement and you are free to share and commercialize those as your materials.

**References:**

1. Zhou, B., Personal Communication.
2. [GISAID](#)
3. Rambaut, A., et al. "A Dynamic Nomenclature Proposal for SARS-CoV-2 Lineages to Assist Genomic Epidemiology." *Nat. Microbiol.* 5 (2020): 1403-1407. PubMed: 32669681.
4. Mercatelli, D. and F. M. Giorgi. "Geographic and Genomic Distribution of SARS-CoV-2 Mutations." *Front. Microbiol.* (2020): doi.org/10.3389/fmicb.2020.01800. PubMed: 32793182.
5. [WHO](#)
6. Gralinski, L. E. and V. D. Menachery. "Return of the Coronavirus: 2019-nCoV." *Viruses* 12 (2020): 135. PubMed: 31991541.

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