Product Information Sheet for NR-55309

SARS-Related Coronavirus 2, Isolate USA/CA/VRLC014/2021 (Lineage B.1.429; Epsilon Variant)

Catalog No. NR-55309

For research use only. Not for use in humans.

Contributor:
Andrew S. Pekosz, Ph.D., Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland, USA

Manufacturer:
BEI Resources

Product Description:
Virus Classification: *Coronaviridae*, *Betacoronavirus*
Species: Severe acute respiratory syndrome-related coronavirus 2
Strain/Isolate: USA/CA/VRLC014/2021 (also referred to as USA/CA-Stanford-02_S12/2021)[1,2]
Original Source: Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate USA/CA/VRLC014/2021 was isolated from a nasal turbinate swab from a 41-year-old male on January 12, 2021 in California, USA.[1,2]

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 USA/CA/VRLC014/2021 is assigned lineage B.1.429 and GISAID clade GH using Phylogenetic Assignment of Named Global Outbreak LINeages (PANGOLIN) tool.[2,3,4] The complete genome of SARS-CoV-2, isolate USA/CA/VRLC014/2021 has been sequenced (GISAID: EPI_ISL_1364488).[1,2] The following mutations are present in the clinical isolate (referred to as hCoV-19/USA/CA-Stanford-02_S12/2021): Spike D614G, Spike L452R, Spike Q675H, Spike S13I, Spike T95I, Spike W152C, N (Nucleocapsid protein) M234I, N P383L, N T205I, NSP3 (Non-structural protein 3) Q57H, NSP8 (Non-structural protein 8) V100L, NSP2 (Non-structural protein 2) T85I, NSP9 (Non-structural protein 9) I65V, NSP12 (Non-structural protein 12) P323L, NSP13 (Non-structural protein 13) D260Y.[2] SARS-CoV-2, lineage B.1.429 was labelled as Epsilon variant by the World Health Organization (WHO).[5]

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.[6]

Material Provided:
Each vial contains approximately 0.1 mL of spin-clarified cell lysate and supernatant from *Homo sapiens* lung adenocarcinoma epithelial cells (Calu-3) infected with SARS-CoV-2, isolate USA/CA/VRLC014/2021.

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

Packaging/Storage:
NR-55309 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 1500 mg per L of sodium bicarbonate supplemented with 2% fetal bovine serum, or equivalent
Infection: Cells should be 60% to 80% confluent
Incubation: 3 to 5 days at 37°C and 5% CO_2
Cytopathic Effect: Cell rounding and sloughing

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: SARS-Related Coronavirus 2, Isolate USA/CA/VRLC014/2021 (Lineage B.1.429; Epsilon Variant), NR-55309, contributed by Andrew S. Pekosz."

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.

Disclaimers:
You are authorized to use this product for research use only. This product is not intended for human use.

Use of this product is subject to the terms and conditions of the Emergency Use Simple Letter Agreement (EUSLA) and the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for

informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

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. Pekosz, A. S., 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.

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

Support Provided by NIAID

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898