

SARS-Related Coronavirus 2, Isolate Hong Kong/VM20001061/2020

Catalog No. NR-52282

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Coronaviridae, Betacoronavirus*

Species: Severe acute respiratory syndrome-related coronavirus 2

Isolate: Hong Kong/VM20001061/2020

Original Source: Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2), isolate Hong Kong/VM20001061/2020 was isolated from a nasopharyngeal aspirate and throat swab from an adult male patient January 22, 2020 in Hong Kong.¹

Comments: Under the nomenclature system introduced by GISAID (Global Initiative on Sharing All Influenza Data), SARS-CoV-2, isolate Hong Kong/VM20001061/2020 is assigned lineage A and GISAID clade S using Phylogenetic Assignment of Named Global Outbreak LINEages (PANGOLIN) tool.^{2,3,4} The complete genome of the clinical isolate SARS-CoV-2, Hong Kong/VM20001061/2020 has been sequenced (GISAID: EPI_ISL_412028). The SARS-CoV-2, isolate Hong Kong/VM20001061/2020, passage 6 (BEI Resources NR-52282 lot 70034432) sequence (GenBank: [MT547814](#); named Severe acute respiratory syndrome coronavirus 2 isolate SARS-CoV-2/human/HKG/VM20001061/2020) shows 7 sequence variants (6 with single nucleotide polymorphisms and one 27-base pair deletion in the ORF6 region) compared to the clinical isolate of SARS-CoV-2, Hong Kong/VM20001061/2020 (GISAID: EPI_ISL_412028).⁵ The variations were detected by whole genome sequencing completed at BEI Resources. Bioinformatic analysis suggested the presence of a mixed viral population in passage 6 where a minority of viral genomes contain the EPI_ISL_412028 sequence.⁵ Plaque purification is suggested if a homogenous virus population is desired for subsequent work.

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 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 0.5 mL of cell lysate and supernatant from *Cercopithecus aethiops* kidney cells infected with SARS-CoV-2, isolate Hong Kong/VM20001061/2020.

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

Packaging/Storage:

NR-52282 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: *Cercopithecus aethiops* kidney cells (Vero E6; ATCC® CRL-1586™)

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/L of sodium bicarbonate supplemented with 2% fetal bovine serum or equivalent

Infection: Cells should be 70% to 80% confluent

Incubation: 4 to 6 days at 37°C and 5% CO₂

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 Hong Kong/VM20001061/2020, NR-52282."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmb15/index.htm.

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Use Restrictions:

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References:

1. Peiris, J. S. M., Personal Communication.
2. [GISAID](#)
3. Rambaut, A., et al. "A Dynamic Nomenclature Proposal for SARS-CoV-2 Lineages to Assist Genomic Epidemiology." *Nat. Microbiol.* (2020): doi: 10.1038/s41564-020-0770-5. PubMed: 32669681.
4. Daniele, M. and F. M. Giorgi. "Geographic and Genomic Distribution of SARS-CoV-2 Mutations." *Front. Microbiol.* (2020): doi.org/10.3389/fmicb.2020.01800.
5. Riojas, M. A., et al. "A Rare Deletion in SARS-CoV-2 ORF6 Dramatically Alters the Predicted Three-Dimensional Structure of the Resultant Protein." *bioRxiv* (2020): <https://doi.org/10.1101/2020.06.09.134460>.
6. Gralinski, L. E. and V. D. Menachery. "Return of the Coronavirus: 2019-nCoV." *Viruses* 12 (2020): 135. PubMed: 31991541.

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