

Human Coronavirus (HCoV), NL63

Catalog No. NR-470

For research use only. Not for human use.

Contributor:

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Manufacturer:

NIH Biodefense and Emerging Infections Research Resources Repository

Product Description:

Virus Classification: *Nodovirales, Coronaviridae, Coronavirus*

Agent: Human coronavirus (HCoV)

Strain/Isolate: NL63 (Amsterdam I)

Original Source: Nasopharyngeal aspirate of human infant with acute respiratory disease (Amsterdam, 2003)¹

Comments: The complete genome of HCoV, NL63 (Amsterdam I) has been sequenced (GenBank: AY567487).¹

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from monkey kidney cells (LLC-MK2; ATCC[®] CCL-7.1[™]) infected with HCoV, NL63.

Packaging/Storage:

NR-470 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: LLC-MK2 cells (ATCC[®] CCL-7.1[™])

Growth Medium: Eagle's Minimum Essential Medium supplemented with 2% fetal bovine serum, or equivalent (lot-specific details are on the Certificate of Analysis)

Infection: Cells should be 24 to 48 hours old and 90% confluent (not 100% confluent)

Incubation: 6 days at 34°C and 5% CO₂

Cytopathic Effect: Cell lysis

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Human Coronavirus (HCoV), NL63, NR-470."

Biosafety Level: 2

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm.

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References:

1. van der Hoek, L., et al. "Identification of a New Human Coronavirus." Nat. Med. 10 (2004): 368-373. PubMed: 15034574. GenBank: AY567487.
2. van der Hoek, L., et al. "Burden of Disease Due to Human Coronavirus NL63 Infections and Periodicity of Infection." J. Clin. Virol. 48 (2010): 104-108. PubMed: 20347384.
3. Schildgen, O., et al. "Identification of Cell Lines Permissive for Human Coronavirus NL63." J. Virol. Methods 138 (2006): 207-2110. PubMed: 16962670.

4. Pirc, K., M. F. Jebbink, B. Berkhout, and L. van der Hoek. "Genome Structure and Transcriptional Regulation of Human Coronavirus NL63." Virology 1 (2004): 7-17. PubMed: 15548333.
5. Vabret, A., et al. "Human Coronavirus NL63, France." Emerg. Infect. Dis. 11 (2005): 1225-1229. PubMed: 16102311.
6. Fouchier, R. A. M., et al. "A Previously Undescribed Coronavirus Associated with Respiratory Disease in Humans." Proc. Natl. Acad. Sci. U.S.A. 101 (2004): 6212-6216. PubMed: 15073334.

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