

Human Metapneumovirus, TN/91-320

Catalog No. NR-22234

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Paramyxoviridae*, *Pneumovirinae*, *Metapneumovirus*

Species: Human metapneumovirus

Strain/Isolate: TN/91-320

Original Source: Human metapneumovirus (HMPV), TN/91-320 was isolated from a human specimen collected in Tennessee, USA, in 1991.^{1,2}

Comments: The complete genome of the TN/91-320 isolate has been sequenced (GenBank: [KC403972](#)).

Human metapneumovirus was first isolated from young children with acute respiratory tract disease in the Netherlands in 2001, and subsequently recognized as a major cause of respiratory illness in infants and children worldwide.^{3,4} Retrospective serological analyses indicated that the virus had been circulating in humans for at least half a century. Two serotypes of HMPV have been defined, with two genetic lineages within each serotype.⁵ TN/91-320 is classified as a type B2 virus.²

Nucleotide sequencing of a portion of the glycoprotein gene of NR-22234 performed at BEI Resources is consistent with the complete genome sequence (GenBank: [KC403972](#)) but not with the glycoprotein gene sequence (GenBank: [JF929900](#)) reported by Yang et al.² The reason for the discrepancy between the two published sequences is not clear.

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from *Macaca mulatta* kidney epithelial cells (LLC-MK2 Derivative; ATCC® CCL-7.1™) infected with HMPV, TN/91-320.

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

Packaging/Storage:

NR-22234 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 Derivative cells (ATCC® CCL-7.1™)

Growth Medium: Opti-MEM® Minimal Essential Medium (Gibco; 31985-070) supplemented with 2 mM L-glutamine, 100 µg per mL CaCl₂, and 5 µg per mL trypsin

Infection: Cells should be 70% to 90% confluent

Incubation: 3 to 10 days at 37°C and 5% CO₂

Cytopathic Effect: Syncytia formation and refractile rounding

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Human Metapneumovirus, TN/91-320, NR-22234."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbli5/index.htm.

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References:

1. Williams, J.V., Personal Communication.
2. Yang, C. F., et al. "Human Metapneumovirus G Protein is Highly Conserved within but not between Genetic Lineages." Arch. Virol. 158 (2013): 1245-1252. PubMed: 23385328.
3. van den Hoogen, B. G., et al. "A Newly Discovered Human Pneumovirus Isolated from Young Children with Respiratory Tract Disease." Nat. Med. 7 (2001): 719-724. PubMed: 11385510.
4. Williams, J. V. "Human Metapneumovirus: An Important Cause of Respiratory Disease in Children and Adults." Curr. Infect. Dis. Rep. 7 (2005): 204-210. PubMed: 15847723.
5. van den Hoogen, B. G., et al. "Antigenic and Genetic Variability of Human Metapneumoviruses." Emerg. Infect. Dis. 10 (2004): 658-666. PubMed: 15200856.

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