

Bovine Coronavirus (BCoV), Mebus

Catalog No. NR-445

For research use only. Not for human use.

Contributor:

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Product Description:

Virus Classification: *Nidovirales, Coronaviridae, Coronavirus, Group 2*

Agent: Bovine coronavirus (BCoV)

Strain: Mebus¹

Original Source: Fecal sample of a calf with diarrhea

Material Provided:

Each vial contains approximately 1 mL of cell lysate and supernatant from human rectal tumor (HRT-18) cells infected with the Mebus strain of BCoV.

Packaging/Storage:

NR-445 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. Freeze-thaw cycles should be avoided.

Growth Conditions:

Host: HRT-18 cells

Growth Medium: Minimum Essential Medium (supplemented with 1% nonessential amino acids, 2% sodium bicarbonate and 1% antibiotics)

Infection: Cells should be approximately 2 to 3 days old

Incubation: 4 to 5 days at 37°C

Cytopathic Effect: Fused, rounded cells, syncytia formation, detached cells

Alternate Hosts: Madin-Darby bovine kidney (MDBK) or bovine turbinate (BT-13) cells²

Note: BCoV is sensitive to ultraviolet light, high temperature and strong mechanical agitation.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Bovine Coronavirus (BCoV), Mebus, NR-445."

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. 4th ed. Washington, DC: U.S. Government Printing Office, 1999. HHS Publication No. (CDC) 93-8395. This text is available online at www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm.

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References:

1. Brian, D. A. "Bovine Coronavirus Strain Mebus, Complete Genome." Direct Submission, 17 Apr 2003. GenBank: U00735.
2. Saif, L. J., R. A. Heckert, K. L. Miller, and M. Tarek. "Cell Culture Propagation of Bovine Coronavirus." J. Tissue Culture Methods 11 (1988): 139-146.
3. Mebus, C. A., E. L. Stair, M. B. Rhodes, and M. J. Twiehaus. "Neonatal Calf Diarrhea: Propagation, Attenuation, and Characteristics of a Coronavirus-like Agent." Am. J. Vet. Res. 34 (1973): 145-150. PubMed: 4568246.
4. Cho, K. O., et al. "Cross-Protection Studies between Respiratory and Calf Diarrhea and Winter Dysentery

- Coronavirus Strains in Calves and RT-PCR and Nested PCR for Their Detection." Arch. Virol. 146 (2001): 2401–2419. PubMed: 11811688.
5. Cho, K. O., et al. "Detection and Isolation of Coronavirus from Feces of Three Herds of Feedlot Cattle during Outbreaks of Winter Dysentery-like Disease." J. Am. Vet. Med. Assoc. 217 (2000): 1191–1194. PubMed: 11043691.

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