Product Information Sheet for NR-451

Bovine Coronavirus (BCoV), Mebus, Chemically Inactivated

Catalog No. NR-451

For research use only. Not for human use.

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Product Description:
Virus Classification: *Nidovirales, Coronaviridae, Coronavirus*, Group 2
Agent: Bovine coronavirus (BCoV), chemically inactivated
Strain: Mebus[1]
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. The suspension of cell lysate and supernatant was treated with binary ethyleneimine to inactivate the virus.

Packaging/Storage:
NR-451 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 Prior to Inactivation:
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) cells[2]
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, Chemically Inactivated, NR-451."

Biosafety Level: 1
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:
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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.
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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.
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