

Avian Coronavirus, Massachusetts (formerly Avian Infectious Bronchitis Virus)

Catalog No. NR-43284

Derived from BEI Resources NR-444

For research use only. Not for human use.

Contributor:

Linda J. Saif, Ph.D., Food Animal Health Research Program, Ohio Agricultural Research and Development Center, Department of Veterinary Preventive Medicine, College of Veterinary Medicine, The Ohio State University, Wooster, Ohio, USA

Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Coronaviridae, Gammacoronavirus*

Species: Avian coronavirus [formerly avian infectious bronchitis virus (IBV)]

Strain/Isolate: Massachusetts

Original Source: Avian coronavirus (CoV), Massachusetts was isolated in 1941 from the respiratory tract of a 19-day-old chicken with mild respiratory disease.^{1,2}

Comments: The virus name on the label reflects previous nomenclature. NR-43284 was derived from BEI Resources NR-444 by removal of contaminating bacteria and fungi. NR-444 is no longer available. The complete genome of Avian CoV, Massachusetts has been sequenced (GenBank: [GQ504724](https://www.ncbi.nlm.nih.gov/nuccore/GQ504724)).³

Avian coronavirus (CoV) is a single-stranded, positive-sense RNA virus that is the leading cause of infectious disease-related economic loss in the poultry industry in the USA.⁴ Avian CoV causes infectious bronchitis in domestic chickens, which primarily affects the respiratory system; but manifestations of the disease are also seen in the renal and reproductive systems.⁵ Many serotypic variants of Avian CoV exist worldwide, making diagnosis and disease prevention a challenging task.⁴

Material Provided:

Each vial contains approximately 1 mL of pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs infected with avian coronavirus, Massachusetts.

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

Packaging/Storage:

NR-43284 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: 9- to 11-day-old SPF embryonated chicken eggs

Infection: Embryonated chicken eggs must be candled to confirm viability prior to inoculation

Incubation: 3 days at 37°C in a humidified chamber

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Avian Coronavirus, Massachusetts, NR-43284.”

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, 2009; see www.cdc.gov/biosafety/publications/bmb15/index.htm.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to

determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Cunningham, C. H. "Symposium on Immunization against Infectious Bronchitis Virus. I. Some Basic Properties of Infectious Bronchitis Virus." Am. J. Vet. Res. 18 (1957): 648-654. PubMed: 13444588.
2. Wertheim, J. O., et al. "A Case for the Ancient Origin of the Coronaviruses." J. Virol. 87 (2012): 7039-7045. PubMed: 23596293.
3. Phillips, J. E., et al. "Changes in Nonstructural Protein 3 are Associated with Attenuation in Avian Coronavirus Infectious Bronchitis Virus." Virus Genes 44 (2012): 63-74. PubMed: 21909766.
4. Cavanagh, D. "Coronavirus Avian Infectious Bronchitis Virus." Vet. Res. 38 (2007): 281-297. PubMed: 17296157.
5. Ignjatoić, J. and S. Sapats. "Avian Infectious Bronchitis Virus." Rev. Sci. Tech. 19 (2000): 493-508. PubMed: 10935276.

ATCC® is a trademark of the American Type Culture Collection.

