

Influenza A Virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1), Tissue Culture Adapted

Catalog No. NR-59872

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Orthomyxoviridae, Influenzavirus A*

Species: Influenza A virus

Strain/Isolate: A/bovine/Ohio/B24OSU-439/2024 (H5N1)

Clade: 2.3.4.4b^{1,2}

Genotype: B3.13¹

Original Source: Influenza A virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1) was isolated from an infected dairy cow on April 5, 2024, in Ohio, USA.¹

Comments: Influenza A virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1) is a highly pathogenic avian influenza (HPAI) that was isolated after passage in embryonated chicken eggs, then grown in MDCK cells. Influenza A virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1) was deposited as susceptible to oseltamivir and zanamivir.¹ Sequence information is available for influenza A virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1) at the Global Initiative for Sharing all Influenza Data (GISAID): (EPI_ISL_19178083).

The detection of H5N1 influenza in dairy cows was first reported in March 2024. To date, four human cases of H5N1 have been recorded in workers exposed to infected dairy cows, however, human-to-human transmission has not been reported.³ Presently, there is no evidence that the influenza H5N1 A/bovine virus has acquired human virus receptor binding capability.^{4,5,6}

Material Provided:

Each vial contains approximately 0.5 mL of cell lysate and supernatant from Madin-Darby canine kidney (MDCK) cells infected with influenza A virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1).

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

Packaging/Storage:

NR-59872 was packaged aseptically in 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: Madin-Darby canine kidney (MDCK) cells (ATCC® CCL-34)

Growth Medium: Eagle's Minimum Essential Medium supplemented with 0.125% bovine serum albumin (BSA) and 1 µg/mL L-1-tosylamido-2-phenylethyl chloromethyl ketone (TPCK)-treated trypsin, or equivalent

Infection: Cells should be 80% to 100% confluent

Incubation: 2 to 4 days at 37°C and 5% CO₂

Cytopathic Effect: Cell rounding and sloughing

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Influenza A Virus, A/bovine/Ohio/B24OSU-439/2024 (H5N1), Tissue Culture Adapted, NR-59872."

Biosafety Level: 3

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:

1. Webby, R.J., Personal Communication.
2. [GISAID](#)
3. *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, www.cdc.gov/bird-flu/situation-summary/index.html. Accessed 3 September 2024.
4. Chopra, P., et al. "Receptor Binding Specificity of a Bovine A(H5N1) Influenza Virus." *bioRxiv* (2024): Jul 31:2024.07.30.605893. PubMed: 39131339.
5. Uyeki, T. M., et al "Highly Pathogenic Avian Influenza A (H5N1) Virus Infection in a Dairy Farm Worker." *N. Engl. J. Med.* 390 (2024): 2028-2029. PubMed: 38700506.
6. Garg, S., et al. "Outbreak of Highly Pathogenic Avian Influenza A (H5N1) Viruses in U.S. Dairy Cattle and Detection of Two Human Cases — United States, 2024." *MMWR Morb. Mortal Wkly. Rep.* 273 (2024): 501-505. PubMed: 38814843

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