

Influenza A Virus, A/NWS/33 (H1N1)

Catalog No. NR-2555

(Derived from ATCC® VR-219™)

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Contributor:

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Product Description:

Virus Classification: *Orthomyxoviridae, Influenzavirus A*

Agent: Influenza A virus

Strain/Isolate: A/NWS/33 (H1N1)

Source: Derived from the A/WS/1933 strain¹ of influenza A by intracerebral passage in mice²

Comments: Influenza A virus, A/NWS/33 (H1N1) was deposited at ATCC® in 1961 by Robert R. Wagner, M.D., Head, Division of Virology, Department of Microbiology, The Johns Hopkins University School of Medicine, Baltimore, Maryland.

The neurotropic/neurovirulent A/NWS/33 (H1N1) strain demonstrates a close antigenic relationship with the parent A/WS/33 strain in cross hemagglutination inhibition assays; however, A/NWS/33 is able to infect a large range of cell types, due to changes in protein/gene structure during adaptation to mouse brain, which are not infected by its parent, A/WS/33.³⁻⁶

Material Provided:

Each vial contains approximately 1 mL of pooled allantoic fluid from specific-pathogen free (SPF) embryonated chicken eggs infected with influenza A virus, A/NWS/33 (H1N1).

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

Packaging/Storage:

NR-2555 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: 10-day-old SPF embryonated chicken eggs

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

Incubation: 1-3 days at 35°C in a humidified chamber without CO₂

Effect: Hemagglutination activity using chicken red blood cells and allantoic fluid from infected embryonated chicken eggs

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Influenza A Virus, A/NWS/33 (H1N1), NR-2555."

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:

1. Smith, W., C. H. Andrewes, and P. P. Laidlaw. "A Virus Obtained from Influenza Patients." Lancet 2 (1933): 66-68.

2. Stuart-Harris, C. H. "A Neurotropic Strain of Human Influenza Virus." Lancet 1 (1939): 497–499.
3. Ward, A. C., A. A. Azad, and J. L. McKimm-Breschkin. "Changes in the NS Gene of Neurovirulent Strains of Influenza Affect Splicing." Virus Genes 10 (1995): 91–94. PubMed: 7483294.
4. Ward, A. C. and T. F. de Koning-Ward. "Changes in the Hemagglutinin Gene of the Nonvirulent Influenza Virus Strain A/NWS/33." Virus Genes 10 (1995): 179–183. PubMed: 8560778.
5. Ward, A. C. "Changes in the Neuraminidase of Neurovirulent Influenza Virus Strains." Virus Genes 10 (1995): 253–260. PubMed: 8560787.
6. Ward, A. C. "Specific Changes in the M1 Protein during Adaptation of Influenza Virus to Mouse." Arch. Virol. 140 (1995): 383–389. PubMed: 7710364.
7. Hook, E. W. and R. R. Wagner. "Hemorrhagic Encephalopathy in Chicken Embryos Infected with Influenza Virus. I. Factors Influencing the Development of Hemorrhages." Bull. Johns Hopkins Hosp. 103 (1958): 125–139. PubMed: 13573015.

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