Product Information Sheet for NR-28622

Influenza A Virus, A/Hong Kong/1/1968-1 Mouse-Adapted 12A (H3N2)

Catalog No. NR-28622

For research use only. Not for use in humans.

Contributor:
Earl G. Brown, Ph.D., Department of Biochemistry, Microbiology, and Immunology, University of Ottawa, Ottawa, Ontario, Canada

Manufacturer:
BEI Resources

Product Description:
Virus Classification: *Orthomyxoviridae*, *Influenzavirus A*
Species: Influenza A virus
Strain/Isolate: A/Hong Kong/1/1968-1 mouse-adapted 12A (H3N2) [also referred to as A/Hong Kong/1-1-MA-12A/1968 (H3N2)]
Original Source: Influenza A virus, A/Hong Kong/1/1968-1 mouse-adapted 12A (H3N2) was derived from a virus isolated from a human in Hong Kong on July 17, 1968.[1]
Comments: Sequence information is available for influenza A virus, A/Hong Kong/1-1-MA-12A/1968 (H3N2) at the Bacterial and Viral Bioinformatics Resource Center.

The prototype strain of the 1968 influenza epidemic in Hong Kong was originally isolated in primary monkey kidney cells by W. K. Chang[1] and sent to H. G. Pereira at the WHO World Influenza Center in London, from whom it was subsequently obtained by the Laboratory Center for Disease Control, Health Canada, Ottawa.[2] The virus was passaged twice in rhesus monkey kidney cells and three times in the allantoic cavity of embryonated chicken eggs before two plaque purifications in Madin-Darby canine kidney (MDCK) cells. The cloned virus (available as BEI Resources NR-28620) was then inoculated intranasally into CD-1 mice and virus extracts were prepared from lung homogenates after three days. After twelve sequential mouse passages, a clonal isolate was obtained by two plaque purifications in MDCK cells.[2,3] The mouse-adapted virus was passaged twice in specific pathogen free embryonated chicken eggs before deposit to BEI Resources.[2,4] Specific mutations in several viral genes are associated with adaptation to the mouse lung and evolution to increased virulence.[2,3] Other mutations, or combinations of mutations, are unique to certain isolates, and can be used to identify each individual mouse-adapted variant. The confirmation of the identity of NR-28622 is described on the Certificate of Analysis.

Note that although NR-28622 was deposited to BEI Resources as A/Hong Kong/1/1968-1 mouse-adapted 12A (H3N2), nucleotide sequence obtained from the same source material by the NIAID Influenza Genome Sequencing Consortium was deposited to NCBI and IRD as A/Hong Kong/1-1-MA-12A/1968 (H3N2).

Material Provided:
Each vial contains approximately 1.0 mL of pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs infected with influenza A virus, A/Hong Kong/1/1968-1 Mouse-Adapted 12A (H3N2).

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

Packaging/Storage:
NR-28622 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: 2 days at 35°C in a humidified chamber
Effect: Hemagglutination activity using allantoic fluid from infected embryonated chicken eggs and chicken red blood cells

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Influenza A Virus, A/Hong Kong/1/1968-1 Mouse-Adapted 12A (H3N2), NR-28622."

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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:
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www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

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References:

1. Chang, W. K. "National Influenza Experience in Hong Kong, 1968." Bull. World Health Organ. 41 (1969): 349-351. PubMed: 5309438.
2. Ping, J., et al. "Genomic and Protein Structural Maps of Adaptive Evolution of Human Influenza A Virus to Increase Virulence in the Mouse." PLoS One. 6 (2011): e21740. PubMed: 21738783.
3. Brown, E. G., et al. "Pattern of Mutation in the Genome of Influenza A Virus on Adaptation to Increased Virulence in the Mouse Lung: Identification of Functional Themes." Proc. Natl. Acad. Sci. U.S.A. 98 (2001): 6883-6888. PubMed: 11371620.
4. Brown, E. G., Personal Communication.

Support Provided by NIAID