

**Influenza A Virus,  
A/Puerto Rico/8-9VMC3/1934 (H1N1)**

**Catalog No. NR-29028**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Virus Classification: *Orthomyxoviridae, Influenzavirus A*

Species: Influenza A virus

Strain: A/Puerto Rico/8-9VMC3/1934 (H1N1); deposited as A/Puerto Rico/8-34-9VMC3/2010 (H1N1)

Original Source: Influenza A virus, A/Puerto Rico/8-9VMC3/1934 (H1N1) was isolated from lung tissue after nine passages of a mouse-adapted strain of influenza A virus, A/Puerto Rico/8/1934 (H1N1) in outbred Swiss mice previously vaccinated with inactivated virus.<sup>1</sup> The parental virus stock was produced in Madin-Darby canine kidney (MDCK) cells using reverse genetics. Serial passage was initiated by direct intranasal infection with MDCK supernatant. Lungs were homogenized two days after infection and the homogenates used to infect the next group of mice. Specific single amino acid substitutions were detected by hemagglutinin gene sequencing following serial passage in vaccinated, but not immunologically naïve, animals. The glutamic acid to lysine change at residue 156 (E156K) of the A/Puerto Rico/8-9VMC3/1934 (H1N1) hemagglutinin protein is representative of the predominant virus population in one serial passage lineage from vaccinated mice. The E156K substitution was shown both to decrease virus neutralization by pooled serum from vaccinated mice and to increase the avidity of virus binding to cellular receptors.

Comments: Sequence information is available for influenza A virus, A/Puerto Rico/8-9VMC3/1934 (H1N1) at the [Influenza Research Database](#). This virus was originally deposited to BEI Resources as influenza A virus, A/Puerto Rico/8-34-9VMC3/2010 (H1N1), but subsequently named A/Puerto Rico/8-9VMC3/1934 (H1N1) by the NIAID Influenza Genome Sequencing Consortium. **Please note that the depositor's original nomenclature was used on the product label.**

**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/Puerto Rico/8-9VMC3/1934 (H1N1).

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

**Packaging/Storage:**

NR-29028 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- to 11-day-old SPF embryonated chicken eggs

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

Incubation: 2 days at 35°C in a humidified chamber without CO<sub>2</sub>

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 BEI Resources, NIAID, NIH: Influenza A Virus, A/Puerto Rico/8-9VMC3/1934 (H1N1), NR-29028."

**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 <http://www.cdc.gov/biosafety/publications/bmlb5/BMBL.pdf>.

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**References:**

1. Hensley, S. E., et al. "Hemagglutinin Receptor Binding Avidity Drives Influenza A Virus Antigenic Drift." Science 326 (2009): 734-736. PubMed: 19900932.

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