

**Influenza A Virus, A/California/07/2009 (HA, NA) x A/Puerto Rico/8/1934 (H1N1)pdm09, Reassortant NYMC X-181**

**Catalog No. NR-44004**

**For research use only. Not for use in humans.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Virus Classification: *Orthomyxoviridae, Influenzavirus A*

Species: Influenza A virus

Reassortant: A/California/07/2009 (HA, NA) x A/Puerto Rico/8/1934 (H1N1)pdm09

Preparation: NR-44004 is a classical reassortant virus derived from A/California/07/2009 (H1N1)pdm09 and reassortant NYMC X-157. The HA and NA proteins are from A/California/07/2009 (H1N1)pdm09.<sup>1,2</sup> NYMC X-157 is A/New York/55/2004 (HA, NA) x A/Puerto Rico/8/1934 (H3N2).

Comments: Influenza A virus, A/California/07/2009 (H1N1)pdm09 was isolated from a 54-year-old man in California, USA on April 9, 2009. The US Food and Drug Administration recommended influenza A/California/07/2009 (H1N1)pdm09-like viruses for use as vaccines during the 2009 influenza pandemic and during 2010-2011, 2011-2012, 2012-2013, and 2013-2014 influenza seasons.<sup>3,4,5,6,7</sup> The World Health Organization has recommended influenza A/California/07/2009 (H1N1)pdm09-like viruses for use as vaccines since the 2010-2011 Northern Hemisphere and the 2010 Southern Hemisphere influenza seasons.<sup>8</sup> Sequence information is available for reassortant NYMC X-181 at the [Bacterial and Viral Bioinformatics Resource Center](#).

**Material Provided:**

Each vial contains approximately 1.0 mL of pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs infected with reassortant influenza A virus, A/California/07/2009 (HA, NA) x A/Puerto Rico/8/1934 (H1N1)pdm09.

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

**Packaging/Storage:**

NR-44004 was packaged aseptically in 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/California/07/2009 (HA, NA) x A/Puerto Rico/8/1934 (H1N1)pdm09, Reassortant NYMC X-181, NR-44004."

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

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**References:**

1. Fulvini, A. A., et al. "Gene Constellation of Influenza A Virus Reassortants with High Growth Phenotype Prepared as Seed Candidates for Vaccine Production." *PLoS One* 6 (2011): e20823. PubMed: 21695145.
2. Ramanunnair, M., et al. "Molecular Signature of High Yield (Growth) Influenza A Virus Reassortants Prepared as Candidate Vaccine Seeds." *PLoS One* 8 (2013): e65955. PubMed: 23776579.
3. Use of Influenza A (H1N1)pdm09 2009 Monovalent Vaccine: Recommendations of the Advisory Committee on Immunization Practices, 2009. PubMed: 19713882.
4. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, 2010. PubMed: 20689501.
5. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, 2011. PubMed: 21866086.
6. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2012-2013 Influenza Season. PubMed: 22895385.
7. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2013-2014. PubMed: 24048214.
8. [WHO Recommendations for Influenza Vaccines](#)

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