

**H9 Hemagglutinin (HA) Protein from Influenza Virus, A/Hong Kong/1073/1999 (H9N2), Recombinant from baculovirus**

**Catalog No. NR-654**

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

**Contributor and Manufacturer:**

NIH - Influenza Pandemic Preparedness in Asia Program

**Product Description:**

Recombinant H9 hemagglutinin (HA) protein from influenza virus A/Hong Kong/1073/1999 (H9N2)<sup>1-3</sup> was produced in Sf9 insect cells using a baculovirus expression vector system.<sup>4,5</sup> Recombinant H9 HA protein was purified using conventional chromatographic techniques.

**Material Provided:**

Each vial contains approximately 0.25 mL of purified recombinant H9 HA protein in 10 mM sodium phosphate (pH 7.0), 150 mM sodium chloride, and 0.01% Tween-20. The concentration, expressed as µg/mL, is shown on the Certificate of Analysis.

**Packaging/Storage:**

Purified recombinant H9 HA protein was packaged aseptically in screw-capped plastic cryovials. This product is provided on wet ice and should be stored at 2 to 8°C immediately upon arrival.

**Functional Activity:**

NR-654 is biologically active in a hemagglutination assay with 0.5% chicken red blood cells. NR-654 is specific to the H9 HA subtype of influenza virus as determined in serological hemagglutination inhibition (HI) assays. Within the H9 HA subtype, NR-654 reacts in HI and ELISA assays with reference antisera of the G1 sublineage, but not with reference antisera of the G9 sublineage. Applications: HI, ELISA, SDS-PAGE, Western blot, antiserum preparation (immunogen).

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: H9 Hemagglutinin (HA) Protein from Influenza Virus, A/Hong Kong/1073/1999 (H9N2), Recombinant from baculovirus, NR-654.”

**Biosafety Level: 1**

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 [www.cdc.gov/biosafety/publications/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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NR-654 is claimed in U.S. Patent Numbers 5,762,939 and 6,103,526, and the continuations, continuations-in-part, reissues and foreign counterparts thereof. Commercial use also requires a license from Protein Sciences Corporation, Meriden, Connecticut. For information call 203-686-0800.

**References:**

1. Saito, T., et al. “Characterization of a Human H9N2 Influenza Virus Isolated in Hong Kong.” Vaccine 20 (2001): 125–133. PubMed: 11567756. GenBank: AB080226.
2. Lin, Y. P., et al. “Avian-to-Human Transmission of H9N2 Subtype Influenza A Viruses: Relationship Between H9N2 and H5N1 Human Isolates.” Proc. Natl. Acad. Sci. U.S.A. 97 (2000): 9654–9658. PubMed: 10920197.
3. Chen, H., et al. “Generation and Evaluation of a High-Growth Reassortant H9N2 Influenza A Virus as a Pandemic Vaccine Candidate.” Vaccine 21 (2003): 1974–

1979. PubMed: 12706686.
- Smith, G. E., et al. Method for Producing Influenza Hemagglutinin Multivalent Vaccines Using Baculovirus. MG-PMC, LLC, assignee. U.S. Patent 5,762,939. 09 Jun. 1998.
  - Smith, G. E., et al. *Spodoptera frugiperda* Single Cell Suspension Cell Line in Serum-Free Media, Methods of Producing and Using. Protein Sciences Corporation, assignee. U.S. Patent 6,103,526. 15 Aug. 2000.

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