

## **Certificate of Analysis for NR-654**

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

## Catalog No. NR-654

This reagent is the tangible property of the U.S. Government.

**Product Description:** Recombinant H9 hemagglutinin (HA) protein from influenza virus A/Hong Kong/1073/1999 (H9N2) was produced in Sf9 insect cells using a baculovirus expression vector system<sup>1</sup> and was purified using conventional chromatographic techniques.

Lot: 4023359 Manufacturing Date<sup>2</sup>: 31JAN2000

TEST	SPECIFICATIONS	RESULTS
SDS-PAGE (Coomassie Blue densitometer scan)	Report results	HA bands (HA0, HA1, HA2) account for > 98% of total density
Concentration by Bicinchoninic Acid Protein Assay <sup>3</sup>	Report results	187 μg/mL (14JUN2005)
Functional Activity Hemagglutination assay Hemagglutination inhibition (HI) assay HI and ELISA assays	Report results Specific to H9 HA subtype Reactive within G1 sublineage of H9 HA subtype	Active Specific to H9 HA subtype Reactive within G1 sublineage of H9 HA subtype
Microbial Content	0.2 micron filter sterilized	0.2 micron filter sterilized
Sterility (post-vialing; 21-day incubation)  Harpo's HTYE broth <sup>4</sup> , 37°C and 26°C, aerobic Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Sheep blood agar, 37°C, aerobic Sheep blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic DMEM with 10% FBS, 37°C and 5% CO <sub>2</sub>	No growth	No growth
Endotoxin Content (Limulus Amoebocyte Lysate assay)	< 0.1 EU endotoxin per μg protein	< 0.01 EU endotoxin per μg protein

<sup>&</sup>lt;sup>1</sup>U.S. Patent Numbers 5,762,939 and 6,103,526.

**Date:** 16 APR 2014

Signature: Derothy C. Young

Title:

Technical Manager, BEI Authentication or designee

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BEI Resources www.beiresources.org E-mail: contact@beiresources.org

Tel: 800-359-7370 Fax: 703-365-2898

<sup>&</sup>lt;sup>2</sup>Note: The manufacturing date indicated on the vial is the deposit date.

<sup>&</sup>lt;sup>3</sup>Pierce Biotechnology, Inc.

<sup>&</sup>lt;sup>4</sup>Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.