

## **Certificate of Analysis for NR-36001**

## Influenza A Virus, A/northern shoveler/Mississippi/11OS145/2011 (H7N9)

Catalog No. NR-36001

**Product Description:** Pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs<sup>1</sup> infected with influenza A virus, A/northern shoveler/Mississippi/11OS145/2011 (H7N9)

Lot<sup>2</sup>: 61712478 Manufacturing Date: 09MAY2013

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity Using Embryonated Chicken Eggs <sup>1</sup> Hemagglutination activity using allantoic fluid from	Positive	Positive
infected eggs and 0.5% chicken red blood cells		
Sequencing of Hemagglutinin and Matrix Coding Regions		
Hemagglutinin (603 nucleotides)	Consistent with A/northern shoveler/Mississippi/11OS145/ 2011 (H7N9)	99% identity with A/northern shoveler/Mississippi/11OS145/ 2011 (H7N9) (GenBank: CY133649)
Matrix gene (865 nucleotides)	Consistent with A/northern shoveler/Mississippi/11OS145/ 2011 (H7N9)	100% identity with A/northern shoveler/Mississippi/11OS145/ 2011 (H7N9) (GenBank: CY133650)
Titer by CEID <sub>50</sub> Assay <sup>3,4</sup> in Embryonated Chicken Eggs <sup>1</sup>	Report results	1.6 × 10 <sup>9</sup> CEID <sub>50</sub> per mL
Sterility (21-day incubation)		
Harpo's HTYE broth <sup>5</sup> , 37°C and 26°C, aerobic	No growth	No growth
Trypticase soy broth, 37°C and 26°C, aerobic	No growth	No growth
Sabouraud broth, 37°C and 26°C, aerobic	No growth	No growth
Blood agar, 37°C, aerobic	No growth	No growth
Blood agar, 37°C, anaerobic	No growth	No growth
Thioglycollate broth, 37°C, anaerobic	No growth	No growth
DMEM with 10% FBS, 37°C and 5% CO <sub>2</sub>	No growth	No growth
Mycoplasma Contamination		
Agar and broth culture (14-day incubation at 37°C)	None detected	None detected
DNA detection by PCR of extracted Test Article nucleic acid	None detected	None detected

<sup>&</sup>lt;sup>1</sup>9- to 10-day-old SPF Embryonated Chicken Eggs acquired from B&E Eggs, York Springs, Pennsylvania <sup>2</sup>Grown in the allantoic cavity of embryonated chicken eggs<sup>1</sup> for 2 days at 35°C in a humidified chamber

Date: 25 NOV 2013 Signature: Michael Q. Gympha

**Title:** Technical Manager, BEI Authentication or designee

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BEI Resources
www.beiresources.org

E-mail: <a href="mailto:contact@beiresources.org">contact@beiresources.org</a>
Tel: 800-359-7370

Fax: 703-365-2898

<sup>&</sup>lt;sup>3</sup>The Chicken Embryo Infectious Dose 50% (CEID₅₀) is the dilution of virus that under the conditions of the assay can be expected to infect 50% of the inoculated embryonated chicken eggs, just as a Lethal Dose 50% (LD₅₀) is expected to kill half of the animals exposed. A reciprocal of the dilution required to yield the CEID₅₀ provides a measure of the infectious titer (or infectivity) of a virus preparation.

<sup>&</sup>lt;sup>4</sup>2 days at 35°C in a humidified chamber

<sup>&</sup>lt;sup>5</sup>Atlas, Ronald M. <u>Handbook of Microbiological Media</u>. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.