

Certificate of Analysis for NR-31123

Influenza A Virus, A/northern shoveler/Mississippi/09OS025/2009 (H12N5)

Catalog No. NR-31123

Product Description: Pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs¹ infected with influenza A virus, A/northern shoveler/Mississippi/09OS025/2009 (H12N5)

Lot²: 61556182 Manufacturing Date: 06MAR2013

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity Using Embryonated Chicken Eggs ¹		
Hemagglutination activity using allantoic fluid from infected eggs and 0.5% chicken red blood cells	Positive	Positive
Sequencing of Hemagglutinin and Matrix Coding Regions		
Hemagglutinin (661 nucleotides) Matrix gene (557 nucleotides)	Consistent with A/northern shoveler/Mississippi/09OS025/ 2009 (H12N5) (GenBank: CY079388) Consistent with A/northern shoveler/Mississippi/09OS025/ 2009 (H12N5) (GenBank: CY079389)	100% identity with A/northern shoveler/Mississippi/09OS025/2009 (H12N5) (GenBank: CY079388) 100% identity with A/northern shoveler/Mississippi/09OS025/2009 (H12N5) (GenBank: CY079389)
Titer by CEID ₅₀ Assay ^{3,4} in Embryonated Chicken Eggs ¹	Report results	2.3×10^8 CEID ₅₀ per mL
Sterility (21-day incubation)		
Harpo's HTYE broth ⁵ , 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 ₂	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

¹9-day-old SPF Embryonated Chicken Eggs acquired from B&E Eggs, York Springs, Pennsylvania

Date: 18 JUL 2013 Signature: Michael Q. Gypthe

Title: Technical Manager, BEI Authentication or designee

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

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²Grown in the allantoic cavity of embryonated chicken eggs¹ for 2 days at 35°C in a humidified chamber

³The 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.

⁴2 days at 35°C in a humidified chamber

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