

Certificate of Analysis for NR-44022

Influenza A Virus, A/Victoria/361/2011 (H3N2)

Catalog No. NR-44022

Product Description: Pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs¹ infected with influenza A virus, A/Victoria/361/2011 (H3N2)

Lot^{2,3}: 61857472 Manufacturing Date: 03JUL2013

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 (696 nucleotides) Matrix (924 nucleotides)	Consistent with A/Victoria/361/2011 (H3N2) Consistent with A/Victoria/361/2011 (H3N2)	100% identity with A/Victoria/361/2011 (H3N2) (GenBank: KC306165) 100% identity with A/Victoria/361/2011 (H3N2)
Titer by CEID ₅₀ Assay ^{5,6} in Embryonated Chicken Eggs ¹	Report results	(EpiFlu: EPI353902) ⁴ 2.8 × 10 ⁹ CEID ₅₀ per mL
Sterility (21-day incubation) Harpo's HTYE broth ⁷ , 37°C and 26°C, aerobic Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Blood agar, 37°C, aerobic Blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic 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) DNA detection by PCR of extracted Test Article nucleic acid	None detected None detected	None detected None detected

¹9- to 10-day-old SPF Embryonated Chicken Eggs acquired from B&E Eggs, York Springs, Pennsylvania

Date: 06 MAR 2014 Signature: Michael Q. Complex

Title: Technical Manager, BEI Authentication or designee

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²Derived from CDC ID No. 2012702646

³Grown in the allantoic cavity of embryonated chicken eggs¹ for 2 days at 34°C in a humidified chamber

⁴Except for the hemagglutinin gene, nucleotide sequence information for influenza A virus, A/Victoria/361/2011 (H3N2) has not been deposited to the NCBI database. However, the complete genome has been sequenced and the matrix gene (segment 7) sequence is available in the publicly accessible EpiFlu™ database sponsored by the Global Initiative on Sharing All Influenza Data (GISAID).

⁵The 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.

⁶2 days at 34°C in a humidified chamber

⁷Atlas, Ronald M. <u>Handbook of Microbiological Media</u>. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.