

Certificate of Analysis for NR-13660

Influenza A Virus, A/California/04/2009 (H1N1)pdm09, BPL-Inactivated

Catalog No. NR-13660

Product Description: NR-13660 is a preparation of influenza A virus, A/California/04/2009 (H1N1)pdm09 that has been inactivated with beta-propiolactone (BPL). The source virus used for the inactivation was BEI Resources NR-13659, Lot No. 58632566.

Lot: 59300924 Manufacturing Date: 26MAY2010

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TEST	SPECIFICATIONS	RESULTS
Innocuity Test (Screening for Viral Inactivation in Eggs) ^{1,2}		
NR-13660, Influenza A Virus, A/California/04/2009 (H1N1)pdm09,		
BPL-inactivated ³		
1 st round of amplification (1:10)	No HA activity detected	No HA activity detected
2 nd round of amplification (neat)	No HA activity detected	No HA activity detected
3 rd round of amplification (neat)	No HA activity detected	No HA activity detected
NR-13659, Influenza A Virus, A/California/04/2009 (H1N1)pdm09		
Positive Control		
1st round of amplification (1:10)	HA activity detected	HA activity detected
2 nd round of amplification (1:10)	HA activity detected	HA activity detected
3 rd round of amplification (1:10)	HA activity detected	HA activity detected
Functional Activity		
RNA detection by PCR of extracted Test Article nucleic acid		
Influenza A virus primer and probe set	Detected	Detected
Influenza H1 primer and probe set	Detected	Detected
Influenza H3 primer and probe set	None detected	None detected
Influenza H5a primer and probe set	None detected	None detected
Influenza H5b primer and probe set	None detected	None detected
Influenza B virus primer and probe set	None detected	None detected
Antigenicity using BD™ Directigen™ EZ Flu A+B (Cat. No. 256050) ³		
Influenza A	Report results	Reactive
Influenza B	Report results	Non-reactive
Sterility (21-day incubation)		
Harpo's HTYE broth ⁴ , 37°C and 26°C, aerobic	No growth detected	No growth detected
Trypticase soy broth, 37°C and 26°C, aerobic	No growth detected	No growth detected
Sabouraud broth, 37°C and 26°C, aerobic	No growth detected	No growth detected
Sheep blood agar, 37°C, aerobic	No growth detected	No growth detected
Sheep blood agar, 37°C, anaerobic	No growth detected	No growth detected
Thioglycollate broth, 37°C, anaerobic	No growth detected	No growth detected
DMEM with 10% FBS, 37°C and 5% CO ₂	No growth detected	No growth detected
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Mycoplasma Contamination	None detected	None detected
DNA detection by PCR of extracted Test Article nucleic acid	None detected	none detected

¹⁹⁻ to 11-day-old embryonated chicken eggs were inoculated with 0.2 mL of the indicated test sample and incubated at 35°C for 2 days. Allantoic fluid from the first round of amplification was tested for HA activity and 0.2 mL was inoculated into 9- to 11-day-old embryonated chicken eggs and incubated at 35°C for 2 days. Allantoic fluid from the second round of amplification was tested for HA activity and 0.2 mL was inoculated into 9- to 11-day-old embryonated chicken eggs and incubated at 35°C for 2 days. Allantoic fluid from the third round of amplification was tested for HA activity.

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²The inoculum for the first round of amplification for the Positive Control (NR-13659) was 1.8 x 10⁵ CEID₅₀ per egg. The inoculum for the first round of amplification for the BPL-inactivated Test Article (NR-13660) was 1.6 x 10⁵ CEID₅₀ equivalents per egg.

³Bulk BPL-inactivated virus tested prior to vialing.

⁴Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.



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Date: 29 MAY 2013 Signature: Doothy C. Young

Title: Technical Manager, BEI Authentication or designee

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