

Certificate of Analysis for NR-3688

Kilbourne F68: A/WSN/1933 (H1N1), Wild Type (ts+) Clone

Catalog No. NR-3688

Product Description: Cell lysate and supernatant from Madin-Darby Canine Kidney (MDCK) cells¹ infected with influenza A virus, A/WSN/1933 (H1N1), wild type (ts+) clone

Lot^{2,3}: 64103051 Manufacturing Date: 17JUN2016

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in MDCK Cells ¹	Cell rounding and detachment	Cell rounding and detachment
Sequencing of Hemagglutinin and Matrix Coding Regions Hemagglutinin (442 nucleotides)	Consistent with A/WSN/1933 (H1N1) (GenBank: CY034132)	100% identity with A/WSN/1933 (H1N1) (Genbank: CY034132)
Matrix (807 nucleotides)	Consistent with A/WSN/1933 (H1N1) (GenBank: CY034133)	99% identity with A/WSN/1933 (H1N1) (GenBank: CY034133)
Titer by TCID ₅₀ Assay ^{3,4,5} in MDCK Cells ¹	Report results	2.8 x 10 ⁵ TCID ₅₀ per mL
Sterility (21-day incubation)		
Harpo's HTYE broth ⁶ , 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
Sheep blood agar, 37°C, aerobic	No growth	No growth
Sheep 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

¹MDCK cells: ATCC[®] CCL-34™

Date: 02 SEP 2016

signature: 1

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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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²Derived from NIAID Catalog No. V-331-OTC451

³Grown in Minimum Essential Medium supplemented with 0.125% Bovine Serum Albumin and 1 μg/mL L-1-tosylamido-2-phenylethyl chloromethyl ketone (TPCK)-treated trypsin for 2 days at 37°C with 5% CO₂.

⁴The Tissue Culture Infectious Dose 50% (TCID₅₀) endpoint is the 50% infectious endpoint in cell culture. The TCID₅₀ is the dilution of virus that under the conditions of the assay can be expected to infect 50% of the culture vessels inoculated, 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 TCID₅₀ provides a measure of the titer (or infectivity) of a virus preparation.

⁵7 days at 37°C with 5% CO₂

⁶Atlas, Ronald M. Handbook of Microbiological Media. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.