

Certificate of Analysis for NR-50415

Middle East Respiratory Syndrome Coronavirus, Florida/USA-2_Saudi Arabia_2014

Catalog No. NR-50415

Product Description: Cell lysate and supernatant from *Cercopithecus aethiops* kidney epithelial cells¹ infected with Middle East respiratory syndrome coronavirus (MERS-CoV), Florida/USA-2 Saudi Arabia 2014

Passage History: V4/V1 (Centers for Disease Control and Prevention/BEI Resources); V# = Number of passages in Vero cells

Lot²: 64531488 Manufacturing Date: 29AUG2016

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in Vero Cells ¹	Refractile cell rounding and detachment	Refractile cell rounding and detachment
Sequencing of Strain-Specific Region (709 nucleotides)	Consistent with MERS-CoV, Florida/USA-2_Saudi Arabia_ 2014	100% identity with MERS-CoV, Florida/USA-2_Saudi Arabia_ 2014 (GenBank: KJ829365)
Titer by TCID ₅₀ Assay in Vero Cells ^{1,3,4}	Report results	1.6 × 10 ⁶ TCID ₅₀ per mL
Sterility (21-day incubation) Harpo's HTYE broth ⁵ , 37°C and 26°C, aerobic Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Sheep blood agar, 37°C, aerobic Sheep 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

¹Vero cells: ATCC® CCL-81™

Date: 28 OCT 2016

Signature:

BEI Resources Authentication

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 Dulbecco's Modified Eagle's Medium (ATCC® 30-2002) supplemented with 5% fetal bovine serum (ATCC® 30-2020) for 3 days at 37°C and 5% CO₂

³TCID₅₀ (50% tissue culture infectious dose): The TCID₅₀ is the 50% infectious endpoint in tissue 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. A reciprocal of the dilution required to yield the TCID₅₀ provides a measure of the titer of a virus preparation.

⁴5 days at 37°C and 5% CO₂

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