

Adenovirus Serotype 5, Clone Ad5-CMV-hACE2/RSV-eGFP, Recombinant Expressing Human ACE2

Catalog No. NR-52390

Product Description:

Human angiotensin-converting enzyme 2 (ACE2; GenBank: [AB046569](#)) complementary DNA was cloned into E1/E3-deleted recombinant adenovirus serotype 5 (Ad5), driven by a cytomegalovirus (CMV) promoter, along with an enhanced green fluorescent protein (GFP) gene, driven by a respiratory syncytial virus (RSV) promoter. NR-52390 is an adenoviral vector engineered to express human ACE2, the receptor of severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2). NR-52390 lot 70035407 was produced by infecting human embryonic kidney cells (HEK-293; ATCC® CRL-1573™) with the deposited material and incubating in Dulbecco's Modified Eagle's Medium (ATCC® 30-2002™) supplemented with 2% fetal bovine serum (ATCC® 30-2020) for 2 days at 37°C with 5% CO₂.

Passage History:

Unknown/HEK-293(1) (prior to BEI Resources/BEI Resources)

Lot: 70035407

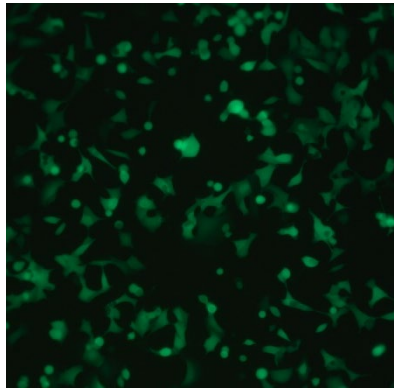
Manufacturing Date: 02MAY2020

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity in HEK-293 Cells	Cell rounding and sloughing GFP expression	Cell rounding and sloughing GFP expression (Figure 1)
Genotypic Analysis by Next-Generation Sequencing	ACE2 sequence confirmed eGFP sequence confirmed	ACE2 sequence confirmed eGFP sequence confirmed
Titer by TCID₅₀ Assay in HEK-293 Cells by Cytopathic Effect and GFP Readout¹ (7 days at 37°C and 5% CO ₂)	Report results	1.6 × 10 ⁹ TCID ₅₀ per mL
Sterility (21-day incubation) Harpo's HTYE broth, 37°C and 26°C, aerobic ² 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 No growth No growth No growth No growth No growth	No growth No growth No growth No growth No growth 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

¹The 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.

²Atlas, Ronald M. *Handbook of Microbiological Media*. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.

Identification by Infectivity in HEK-293 Cells by GFP Expression



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23 JUN 2020

Program Manager or designee, ATCC Federal Solutions

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