



# SARS-CoV-2 Pseudovirus

LP.8.1 Variant

Luciferase reporter

Lot #250819



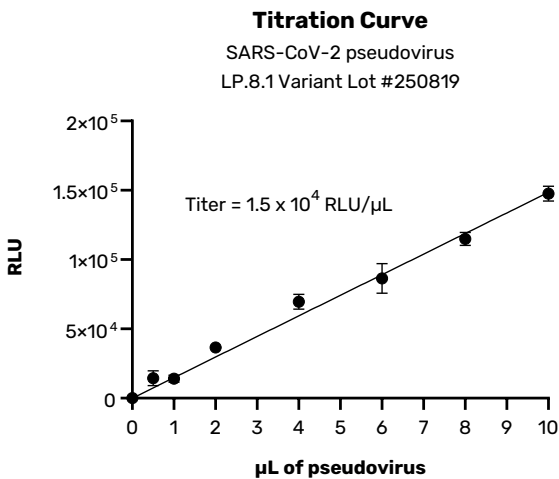
**Certificate of Analysis**

## 1. Summary

This certificate provides a functional validation of the SARS-CoV-2 pseudovirus, LP.8.1 variant, lot #250819. The titer is  $1.5 \times 10^4$  RLU/ $\mu$ L. A fold-to-background ratio is obtained with 2  $\mu$ L per well (96-well plate). One milliliter is sufficient to perform approximately 500 reactions, or 5  $\times$  96-well plates. According to IVANO Bioscience’s protocol, available upon request.

## 2. Transduction efficiency assay

<b>Target cells</b>	HEK293 cells (ACE2 <sup>+</sup> )
<b>Volume of pseudovirus</b>	0 – 0.5 – 1 – 2 – 4 – 6 – 8 – 10 $\mu$ L/well
<b>Detection signal</b>	Luminescence (firefly luciferase)
<b>Detection method</b>	Microplate reader Biotek Synergy H1 (Gain: 135)



Pseudovirus ( $\mu$ L)	RLU 1	RLU 2	Mean	CV	Fold to Background
0	1.60E+01	2.10E+01	1.85E+01	3.54E+00	1.00E+00
0.5	1.07E+04	1.81E+04	1.44E+04	5.28E+03	7.78E+02
1	1.58E+04	1.23E+04	1.41E+04	2.45E+03	7.61E+02
2	3.64E+04	3.67E+04	3.66E+04	1.71E+02	1.98E+03
4	6.58E+04	7.34E+04	6.96E+04	5.35E+03	3.76E+03
6	9.40E+04	7.87E+04	8.63E+04	1.08E+04	4.67E+03
8	1.18E+05	1.12E+05	1.15E+05	4.76E+03	6.21E+03
10	1.44E+05	1.51E+05	1.48E+05	5.31E+03	7.98E+03

### Figure 1: Transduction efficiency curve

A volume range of pseudovirus was mixed in a final volume of 50  $\mu$ L of medium, in a 96-well plate. Then, 50  $\mu$ L of medium containing 10,000 cells was seeded in each well. On the day of analysis, an additional 100  $\mu$ L of Bright-Glo™ Luciferase reagent was added in each well and incubated for 2 minutes. Data in relative unit luminescence (RLU) were obtained from the analysis of 150  $\mu$ L of the cell lysate, using a microplate reader. Data are expressed in relative unit luminescence (RLU).

### Conclusion:

The SARS-CoV-2 pseudovirus, LP.8.1 variant (lot #250819), is capable of transducing target cells. The titer is  $1.5 \times 10^4$  RLU/ $\mu$ L. Using two microliters of pseudovirus per reaction in a 96-well plate results in a 1,000-fold increase in RLU compared to the background. Accordingly, 1 mL of lot #250819 can be used to perform approximately 500 reactions, or 5  $\times$  96-well plates, according to IVANO Bioscience’s protocol (available upon request).

### 3. Additional information

<b>Instruction of Use</b>	We recommend determining the titer in your lab's conditions before performing any experiments. Handle under biosafety level-2.
<b>Pseudovirus</b>	3 <sup>rd</sup> generation lentiviral vector, incompetent replication and non-toxic.
<b>Pseudotyping</b>	Spike glycoprotein of the LP.8.1 variant SARS-CoV-2.
<b>Pseudotyping sequence</b>	MFVFLVLLPLVSSQCVMLFNLITTTQSYTNFTRGVVYPDKVFRSSVLHLLTQDLFLPFFS NVTWFHAISGTNGTKRFDNPVLPFNDGVYFASTSEKSNIRGWIFGTTLDLSDSKTQSLIVNNA TNVFIKVFCEFCNDPFLDVYHKNNKSWMESESGVYSSANNCTFEYVSQPFLMDLEGKQ GNLKNLSEFVFNIDGYFKIYSKHTPIIGRDFPQGFSALEPLVDLPIGINITRFQTLALNRS YLTPGDSSSGWTAGAADYYVGYLQPRTFLLKYNENGTITDAVDCALDPLSETKCTLKSFT VEKGIYQTSNFRVQPTESIVRFPNVTNLCPFHEVFNATTFASVYAWNRTNISNCVADYSV LYNFAPFFAFKCYGVSPTKLNLDLCTNVYADSFVIKNEVSIAPGQTGNIADYNKLPD DFTGCVIAWNSNKLDSKRSNGYDYWYRSLRKSCLKPFERDISTEIQAGNKPKCKGKPNP YFPLESYGFRPTYGVGHQPYRVVLSFELLHAPATVCGPKKSTNLVKNKCVNFNFNGLT GTGVLTKSNKKFLPFQQFGRDIVDTTDAVRDPQTLLEILDITPCSFGGVSVITPGTNTSNQV AVLYQGVNCTEVSVAIHADQLTPTWRVYSTGSNVFQTRAGCLIGA EYVNNSEYECDIPIGA GICASYQTQTKSRSRASSVASQSIAYTMSLGAENSVAYSNNIAIPTNFTISVTTEILPVS MTKTSVDCTMYICGDSTECNLLLQYGSFCTQLKRALTGIAVEQDKNTQEVFAQVKQIYK TPPIKYFGGFNFSQILPDPSKPSKRSFIEDLLFNKVTLADAGFIKQYGDCLGDIAARDLICA QKFNGLTVLPLLTDEMIAQYTSALLAGTITSGWTFGAGAALQIPFAMQMAYRFNGIGVT QNVLYENQKLIANQFNSAIGKIQDSLSTASALGKLQDVVNHNAQALNTLVKQLSSKFGAI SSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLG QSKRVDFCGKGYHLSFPQSAPHGVVFLHVTVVPAQEKNFTTAPAICHHDGRAHFPREG VFVSNGTHWFLTQRNFYEPQIITDNTFVSGNCDVVIGVNNNTVYDPLQLELDSFKEELDK YFKNHTSPDVLGDISGINASVNIQKEIDRLNEVAKNLNESLIDLQELGKYEQYIKWPWYI WLGFIAGLIAIVMVTIMLCCMTSCCCLKGCCSCGSCC
<b>Reporter protein</b>	Firefly luciferase.
<b>Storage</b>	- 80 °C, avoid freeze/thaw cycles.
<b>For more information</b>	<a href="mailto:mathias.mangion@ivanobioscience.com">mathias.mangion@ivanobioscience.com</a> Message object should contain: " LP.8.1 variant SARS-CoV-2 pseudovirus - #250819".
<b>Intended use</b>	For Research Use Only. Not for Use in Diagnostic Procedures. Not Meant for Resale.