



SARS-CoV-2 Pseudovirus

KP.3.1.1 Variant

Luciferase reporter

Lot #250819



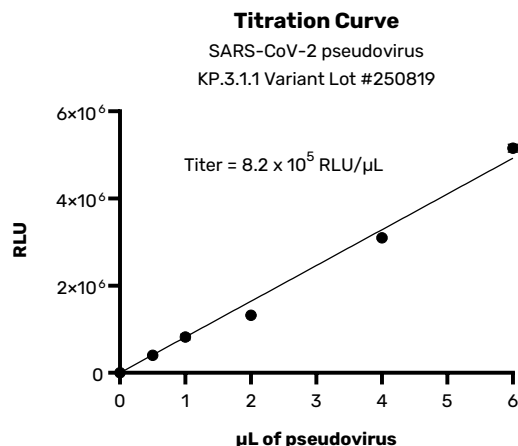
Certificate of Analysis

1. Summary

This certificate provides a functional validation of the SARS-CoV-2 pseudovirus, KP.3.1.1 variant, lot #250819. The titer is 8.2×10^5 RLU/ μ L. A fold-to-background ratio is obtained with 1 μ L per well (96-well plate). One milliliter is sufficient to perform approximately 1,000 reactions, or 10 \times 96-well plates. According to IVANO Bioscience's protocol, available upon request.

2. Transduction efficiency assay

Target cells	HEK293 cells (ACE2 ⁺)
Volume of pseudovirus	0 – 0.5 – 1 – 2 – 4 – 6 μ L/well (signal saturation occurs at \geq 8 μ L)
Detection signal	Luminescence (firefly luciferase)
Detection method	Microplate reader Biotek Synergy H1 (Gain: 135)



Pseudovirus (μ L)	RLU 1	RLU 2	Mean	CV	Fold to Background
0	4.31E+02	3.77E+02	4.04E+02	3.82E+01	1.00E+00
0.5	4.08E+05	3.97E+05	4.02E+05	7.45E+03	9.96E+02
1	7.75E+05	8.70E+05	8.22E+05	6.68E+04	2.04E+03
2	1.33E+06	1.31E+06	1.32E+06	1.11E+04	3.27E+03
4	3.07E+06	3.12E+06	3.10E+06	3.61E+04	7.66E+03
6	5.09E+06	5.22E+06	5.16E+06	9.17E+04	1.28E+04

Figure 1: Transduction efficiency curve

A volume range of pseudovirus was mixed in a final volume of 50 μ L of medium, in a 96-well plate. Then, 50 μ L of medium containing 10,000 cells was seeded in each well. On the day of analysis, an additional 100 μ 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 μ L of the cell lysate, using a microplate reader. Data are expressed in relative unit luminescence (RLU).

Conclusion:

The SARS-CoV-2 pseudovirus, KP.3.1.1 variant (lot #250819), is capable of transducing target cells. The titer is 8.2×10^5 RLU/ μ L. Using one microliter 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 1,000 reactions, or 10 \times 96-well plates, according to IVANO Bioscience's protocol (available upon request). Note that signal saturation occurs at \geq 8 μ L per well of pseudovirus.

3. Additional information

Instruction of Use	We recommend determining the titer in your lab's conditions before performing any experiments. Handle under biosafety level-2.
Pseudovirus	3 rd generation lentiviral vector, incompetent replication and non-toxic.
Pseudotyping	Spike glycoprotein of the KP.3.1.1 variant SARS-CoV-2.
Pseudotyping sequence	<pre>MFVFLVLLPLVSSQCVMPLFNLITTTQSYTNFTRGVVYPDKVFRSSVLHLLTQDLFLPFFS NVTWFHAISGTNGTKRFDNPVLPFNDGVYFASTSEKSNIRGWIFGTTLDLSDKQSLIVNNA TNVFIKVFCEFCNDPFLDVYHKNNKSWMESESGVYSSANNCTFEYVSQPFLMDLEGKQ GNFKNLREFVFKNIDGYFKIYSKHTPIIGRDFPQGFSALEPLVDLPIGINITRFQTLALNRS YLTPGDSSSGWTAGAADYYVGYLQPRFTLLKYNENGTITDAVDCALDPLSETKCTLKSFT VEKGIYQTSNFRVQPTESIVRFPNVTNLCPFHEVFNATRFASVYAWNRRTRISNCVADYSV LYNFAPFFAFKCYGVSPTKLNLDLCTNVYADSFVIKNEVSIAPGQTGNIADYNKLPD DFTGCVIAWNSNKLDSKHSNGYDYWYRSLRKSCLKPFERDISTEIQAGNKPKGKGPNC YFPLESYGFRPTYGVGHQPYRVVLSFELLHAPATVCGPKKSTNLVKNKCVNFNFNGLT GTGVLTKSNKKFLPFQQFGRDIVDTTDAVRDPQTLLEILDITPCSFGGVSVITPGTNTSNQV AVLYQGVNCTEVSVAIHADQLTPTWRVYSTGSNVFQTRAGCLIGA EYVNNSEYCDIPIGA GICASYQTQTKSRSRASSVASQSIAYTMSLGAENSVAYSNNIAIPTNFTISVTTEILPVS MTKTSVDCTMYICGDSTECNLLLQYGSFCTQLKRALTGIAVEQDKNTQEVFAQVKQIYK TPPIKYFGGFNFSQILPDPSKPSKRSFIEDLLFNKVTADAGFIKQYGDCLGDIAARDLICA QKFNGLTVLPLLTDemiaQYTSALLAGTITSGWTFGAGAALQIPFAMQMAYRFNGIGVT QNVLYENQKLIANQFNSAIGKIQDSLSTASALGKLQDVVNHNAQALNTLVKQLSSKFGAI SSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYVTQQLIRAAEIRASANLAATKMSECVLG QSKRVDFCGKGYHLSFPQSAPHGVVFLHVTVVPAQEKNFTTAPAICHDKGAHFREG VFVSNGTHWFLTQRNFYEQIITDNTFVSGNCDVVIGVNNNTVYDPLQLELDSFKEELDK YFKNHTSPDVLGDISGINASVVNIQKEIDRLNEVAKNLNESLIDLQELGKYEQYIKWPWYI WLGFIAGLIAIVMVTIMLCCMTSCCCLKGCCSCGSCC</pre>
Reporter protein	Firefly luciferase.
Storage	- 80 °C, avoid freeze/thaw cycles.
For more information	mathias.mangion@ivanobioscience.com Message object should contain: " K.3.1.1 variant SARS-CoV-2 pseudovirus - #250819".
Intended use	For Research Use Only. Not for Use in Diagnostic Procedures. Not Meant for Resale.