IVANO BIOSCIENCE

Pseudovirus Ebola Zaire (luciferase)

Lot #PsV-EBZLU-0100

Quality control report

1. Summary

The lot number #PsV-EBZLU-0100 is a lentivirus-based pseudovirus pseutotyped with the glycoprotein of the Ebola Zaire variant. This quality control report demonstrates that the lot #PsV-EBZLU-0100 is efficient for cell transduction and can be effectively neutralized by a standard neutralizing antibody.

2. Transduction efficiency assay

Target cells	HEK293 cells (TIM-1$^+$)
Volume of pseudovirus	0, 1, 5, 10, 20, 30 or 40 µL/well
Detection signal	Luminescence (firefly luciferase)
Detection method	Microplate reader

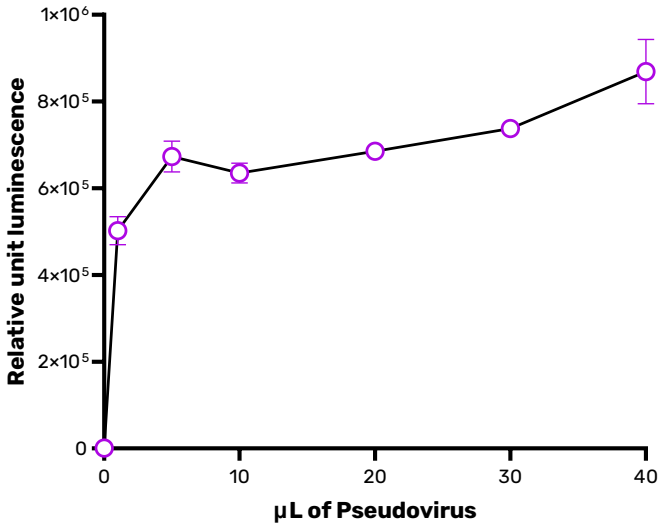

Figure 1: Transduction efficiency curve.

A volume range of pseudovirus was mixed in a final volume of 50 µL of culture complete medium, in a 96-well plate. Then, an additional 50 µL containing 20 000 HEK293 cells (TIM-1$^+$) was seeded in each well. Luc expression analysis was performed 48 hours post-infection by a luminescence microplate reader.

Conclusion	The Luc Ebola Zaire pseudovirus (#PsV-EBZLU-0100) can transduce the target cells.

3. Neutralization assay

Target cells	HEK293 cells (TIM-1$^+$)
Volume of pseudovirus	1 µL/well
Neutralizing antibody (Nabs)	Anti-Ebola surface glycoprotein [KZ52], AB00690-10.0
Detection signal	Luminescence (firefly luciferase)
Detection method	Microplate reader

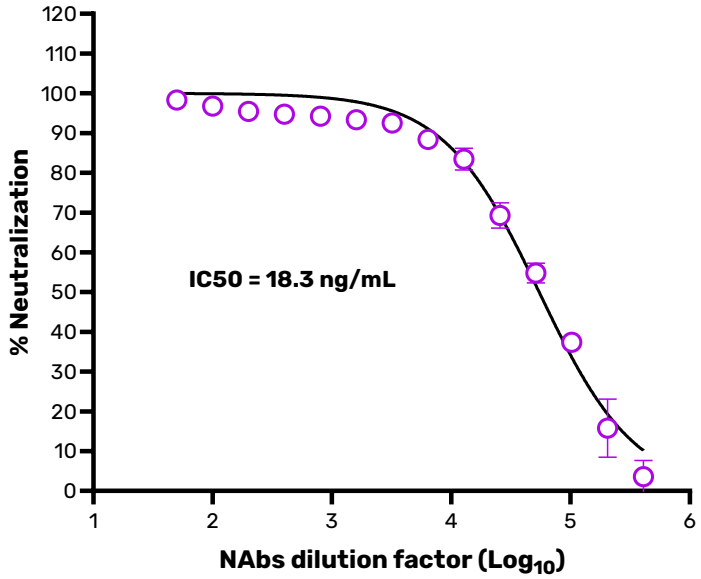

Figure 2: Neutralization curve.

A monoclonal neutralizing antibody (AB00690-10.0) at 1 µg/µL was serial diluted in a final volume of 50 µL of complete medium and incubated for 1 hour at 37 °C, with 1 µL of pseudovirus, in a 96-well plate. Then, an additional 50 µL containing 20 000 HEK293 cells (TIM-1$^+$) was seeded in each well and incubated for 48 hours. Finally, an additional 100 µL of Bright-Glo™ Luciferase buffer was added in each well and incubated for 2 minutes. Data in relative unit luminescence (RLU) were obtained from the analysis of 150 µL of the cell lysate with a microplate reader. Raw data were analyzed using a log(inhibitor) *vs* normalized-response (variable slope) non-linear regression model in Prism v10 (GraphPad). Percentages of neutralization were normalized considering only cells into wells as 100% neutralization and cells transduced by pseudoviruses without any NAbs as 0% neutralization. Data are representative of duplicates.

Conclusion	The Luc Ebola Zaire pseudovirus #PsV-EBZLU-0100 can be efficiently neutralized by neutralizing antibodies.

3. Additional information

Caution	We recommend determining the optimal pseudovirus volume to use according to your specific experimental conditions.
Pseudovirus	3rd generation, replication incompetent
Pseudotyping	Ebola virus glycoprotein from the 2014 outbreak in west Africa (GENBANK : KP096420.1)
Glycosylation origin	Human
Reporter protein	Firefly luciferase
Storage	- 80 °C, avoid freeze/thaw cycles
For more information	mathias.mangion@ivanobioscience.com Message object should contain : "#PsV-EBZLU-0100"