



# TECH DATA SHEET

## REPORTER VIRUS PARTICLES

### DESCRIPTION

|                          |                                                                        |
|--------------------------|------------------------------------------------------------------------|
| <b>Product</b>           | RVP-1214G, Influenza A Reporter Virus Particles (RVPs)                 |
| <b>Lot</b>               | IAG-783.10A                                                            |
| <b>Subtype</b>           | H5N1                                                                   |
| <b>Strain</b>            | American Wigeon/SC/22-000345-001/2021                                  |
| <b>Reporter</b>          | GFP                                                                    |
| <b>Size</b>              | 1.0 mL/vial                                                            |
| <b>Packaging</b>         | 20% FBS/DMEM                                                           |
| <b>Viral Titer</b>       | $4.45 \times 10^6$ TU/ml†                                              |
| <b>Recommended Input</b> | 1.25µL per well (96-well plate) for ≥ 20% infectivity in a flow assay* |
| <b>Mycoplasma Test</b>   | Negative                                                               |
| <b>Expiration Date</b>   | November 2027                                                          |

### SAFETY & HANDLING

|                              |                                                  |
|------------------------------|--------------------------------------------------|
| <b>Shipping</b>              | Shipped on dry ice                               |
| <b>Stability and Storage</b> | Store at $\leq -80^{\circ}\text{C}$ upon receipt |

\* Determined in the HEK-293T cell line

Influenza A RVPs are used to test the ability of serum, antibodies, and drugs to neutralize infectivity. RVPs display antigenically correct HA/NA protein pseudotyped on replication-incompetent virus particles that contain a heterologous lentiviral (HIV) core. RVPs are capable of a single round of infection and carry a genome that expresses either a GFP or luciferase optical reporter gene upon infection. RVPs are produced in HEK-293T cells using four separate plasmids, encoding the HA protein, the NA protein, a lentiviral gag polyprotein, and a reporter gene.

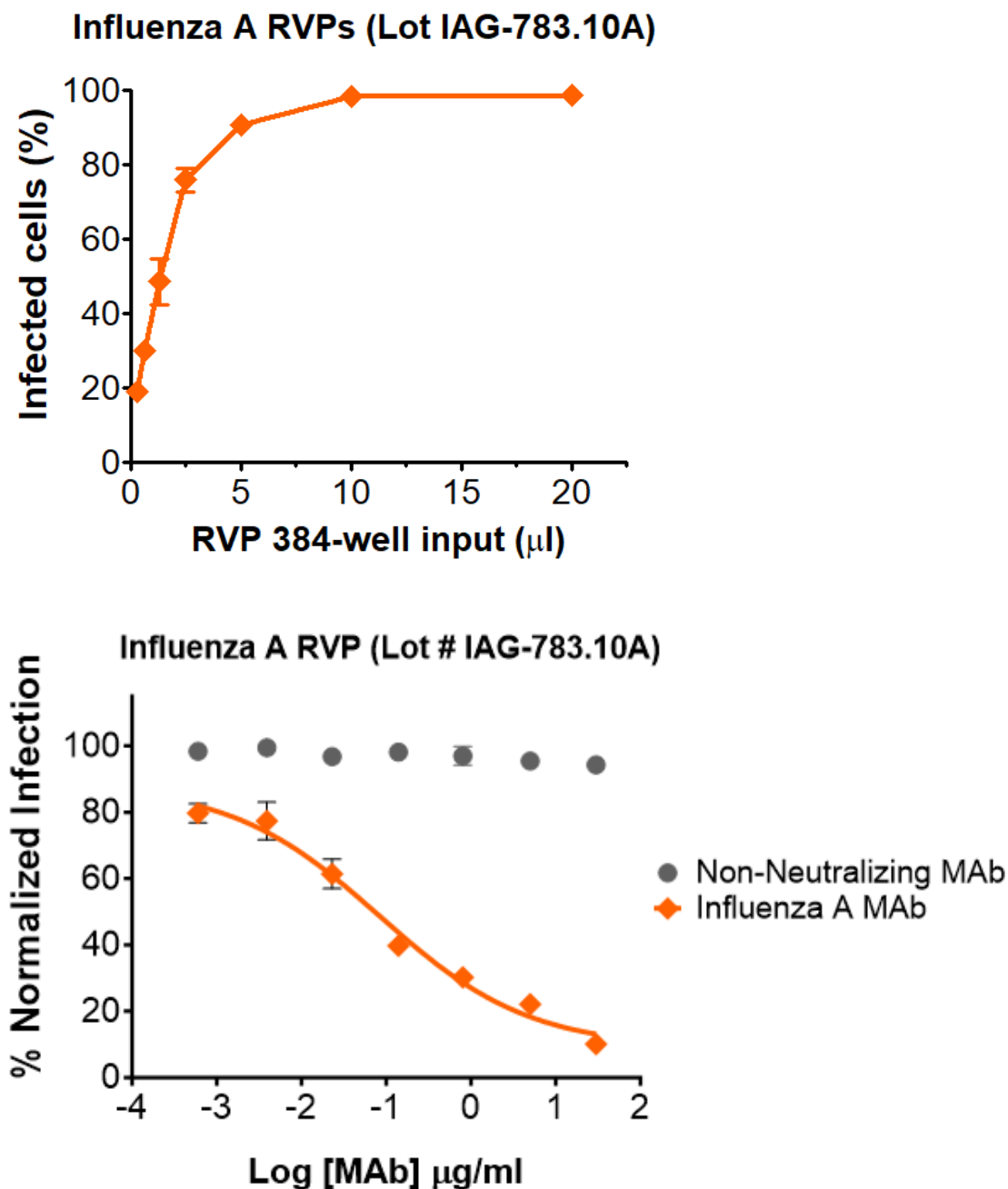
RVPs are created using a second-generation lentiviral system with components that are highly unlikely to recombine to produce a fully infectious virus (requiring 3 separate recombination events to do so). However, lentiviruses are capable of genomic integration and RVPs are derived from biological materials so should be handled with caution within a BSL2 or enhanced BSL2 laboratory environment. RVPs are not to be used in humans or in animals raised for food.

Thaw tubes in a  $37^{\circ}\text{C}$  water bath for 3 minutes and place on ice until ready to use. RVPs will appear as a translucent solution. Gently mix prior to use and pulse tube for 3 seconds at high speed in a tabletop microfuge to recover all volume from the tube. Vortexing of RVPs should be avoided. Re-freezing of RVPs is not recommended.

† Titer is calculated using the estimated number of cells during the time of infection, using the following equation:

$$\left[ \left( \frac{\% \text{ GFP positive cells}}{100} \right) \times \left( \frac{9,000 \text{ cells}}{1 \text{ well}} \right) \times \left( \frac{1 \text{ well}}{\text{RVP input } (\mu\text{L})} \right) \right] \times \frac{1000 \mu\text{L}}{1 \text{ mL}} = X \frac{\text{Transforming Units (TU)}}{\text{mL}}$$

## INFECTIVITY AND NEUTRALIZATION DATA



Infectivity and neutralization determined in HEK-293T cells. Infectivity data represents the average of three independent vials, each tested in quadruplicate.

Neutralization utilized 5 μl of Influenza A RVPs in a 384-well plate. GFP positive cells were detected with an Intellicyt iQue flow cytometer using the BL-1 channel (Ex. 488 nm, Em. 530).