



TECH DATA SHEET

REPORTER VIRUS PARTICLES

DESCRIPTION

Product	RVP-1221G, Influenza A Reporter Virus Particles (RVPs)
Lot	IAG-942A
Subtype	H1N1
Strain	New Caledonia/20/99
Reporter	GFP
Size	1.0 mL/vial
Packaging	10% FBS/DMEM/10mM HEPES
Viral Titer	9.71×10^5 TU/ml†
Recommended Input	5 μ L per well (96-well plate) for $\geq 20\%$ infectivity in a flow assay*
Mycoplasma Test	Negative
Expiration Date	July 2027

SAFETY & HANDLING

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

* Determined in the MDCK-SIAT1 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.

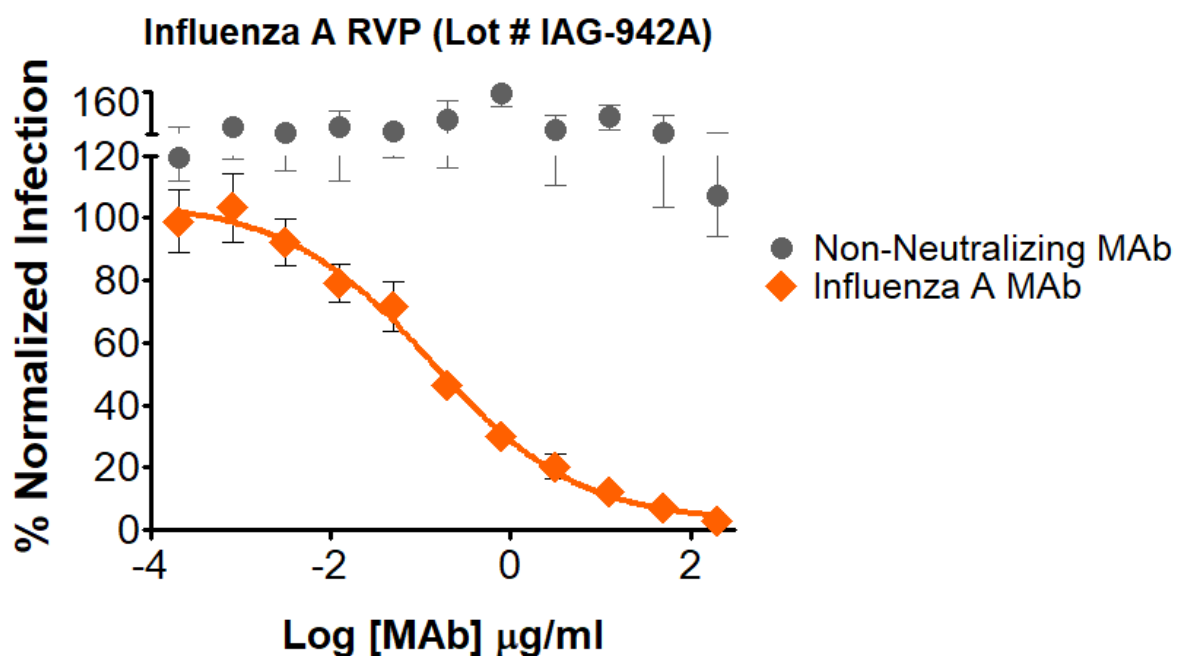
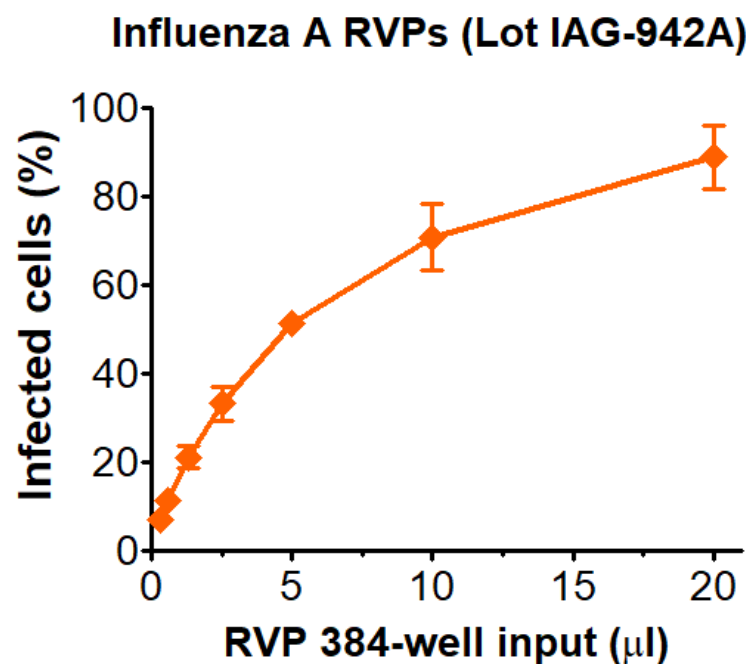
RVPs are created using a second-generation lentiviral system with components that are highly unlikely to recombine to produce a fully infectious virus (requiring 3 separate recombination events to do so). However, lentiviruses are capable of genomic integration and RVPs are derived from biological materials 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°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:

$$\left[\left(\frac{\% \text{ GFP positive cells}}{100} \right) \times \left(\frac{6,000 \text{ cells}}{1 \text{ well}} \right) \times \left(\frac{1 \text{ well}}{\text{RVP input } (\mu\text{L})} \right) \right] \times \frac{1000 \mu\text{L}}{1 \text{ mL}} = X \frac{\text{Transforming Units (TU)}}{\text{mL}}$$

INFECTIVITY AND NEUTRALIZATION DATA



Infectivity and neutralization are determined in MDCK-SIAT1 cells. Infectivity data represents the average of two 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).