TECH DATA SHEET

REPORTER VIRUS PARTICLES

DESCRIPTION	
Product	RVP-1212L, Influenza A Reporter Virus Particles (RVPs)
Lot	IAL-805A
Subtype	H3N2
Strain	Darwin/6/2021
Reporter	*Renilla* Luciferase
Size	1.0 mL/vial
Packaging	10% FBS/DMEM/10mM HEPES
Recommended Input	1µL per well (96-well plate) for a S:B > 200*****
Mycoplasma Test	Negative
Expiration Date	February 2027

SAFETY & HANDLING	
Shipping	Shipped on dry ice
Stability and Storage	Store at ≤ -80°C upon receipt

***** Determined in the MDCK-SIAT1 cell line. Signal-to-background values can vary depending on instrument make, model, and/or calibration.

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.

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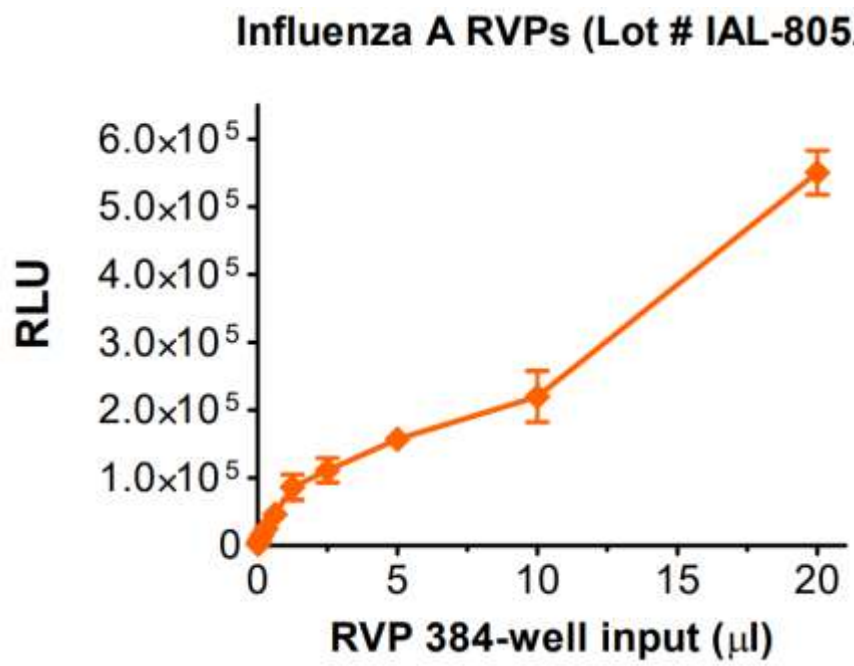
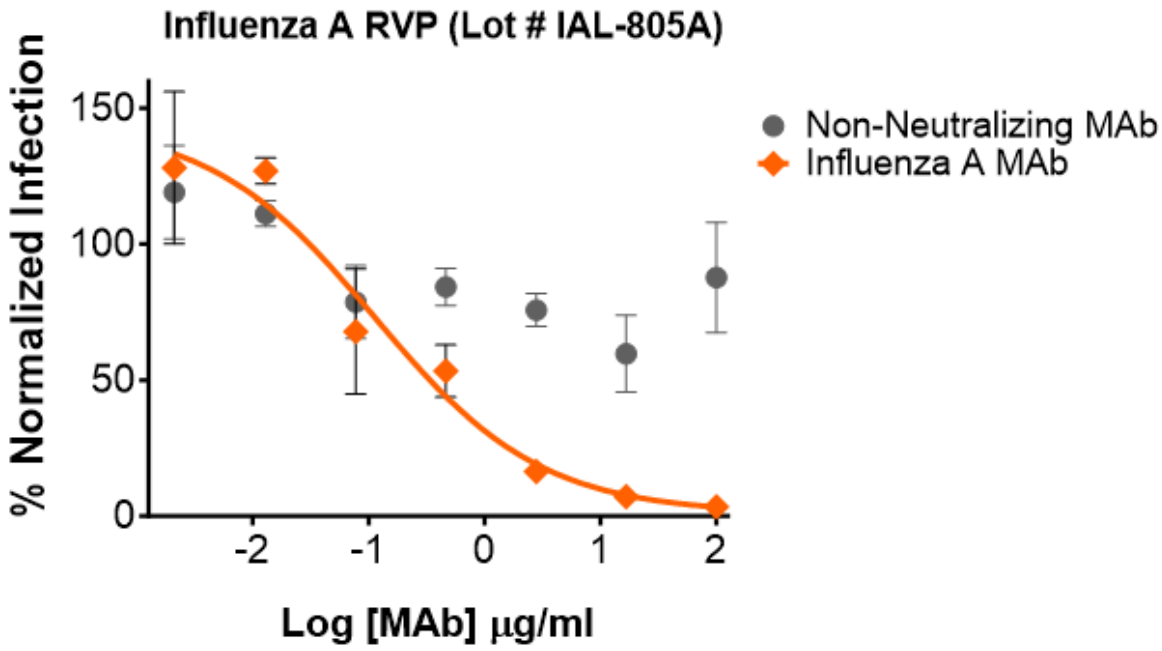
INFECTIVITY AND NEUTRALIZATION DATA





Infectivity and neutralization determined in MDCK-SIAT1 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. *Renilla* luciferase activity measured using the Promega *Renilla*-Glo luciferase assay system (Promega #E2710). Sample luminescence was read using a Perkin-Elmer Envision plate reader.

SIGNAL TO BACKGROUND	
RVP 384-well Input (µl)	**Signal: Background**
20	17412
10	7010
5	4980
2.5	3509
1.25	2737
0.63	1467
0.31	800

Signal to background is calculated using mock infected cells as the negative control value.