TECH DATA SHEET

REPORTER VIRUS PARTICLES

DESCRIPTION	
Product	RVP-770F, SARS-CoV-2 Reporter Virus Particles (RVPs)
Lot	CF-785A
Strain	BA.2 (OMICRON)
Reporter	*firefly* luciferase
Size	1.0 mL/vial
Packaging	20% FBS/DMEM
Recommended Input	5µL per well (96-well plate) for a S:B ≥ 200*
Mycoplasma Test	Negative
Expiration Date	December 2027

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

* Determined in the 293T-ACE2 stable cell line. Signal-to-background values can vary depending on instrument make, model, and/or calibration.

SARS-CoV-2 RVPs are used to test the ability of serum, antibodies, and drugs to neutralize the infectivity of SARS-CoV-2. RVPs display antigenically correct spike 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 three separate plasmids, encoding the spike 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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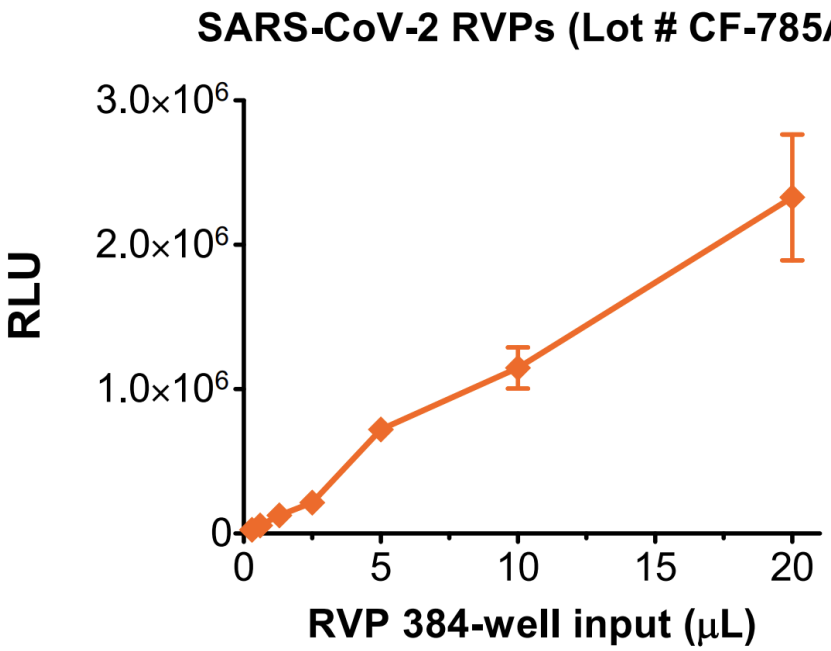
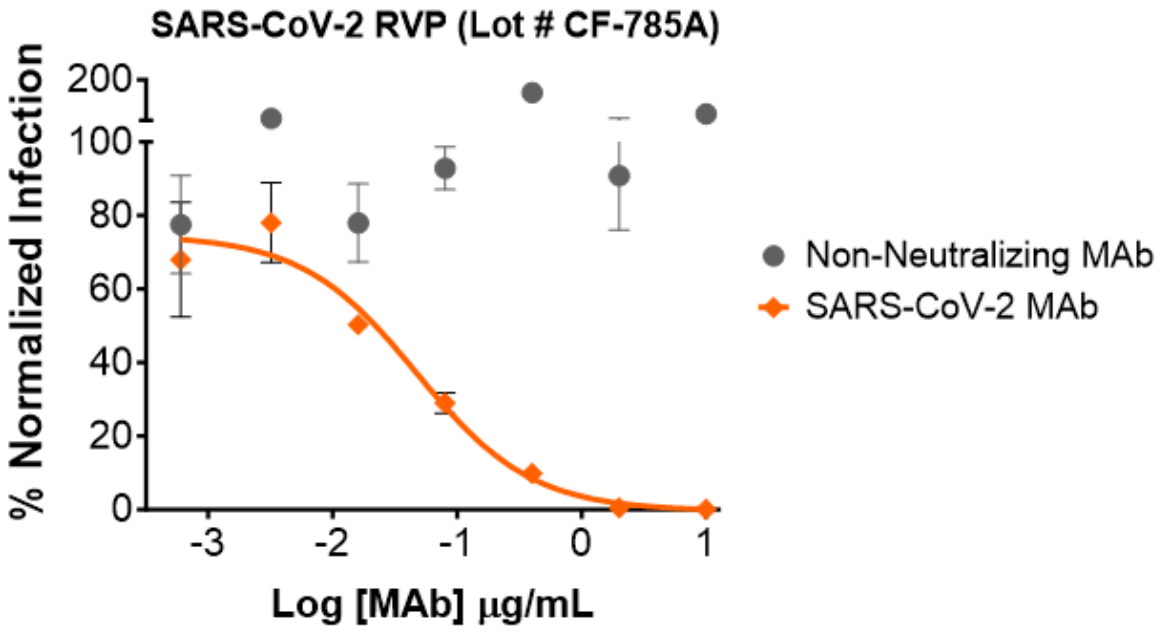
Version 2, 8/4/2025

INFECTIVITY & NEUTRALIZATION DATA





Infectivity and neutralization determined in HEK-293T cells stably over-expressing ACE2 (Cat# C-HA102). Infectivity data represents the average of two independent vials, each tested in quadruplicate.

Neutralization utilized 5 µl of SARS-CoV-2 RVPs in a 384-well plate. *Firefly* luciferase activity measured using the Promega luciferase assay system (Promega #E1500). Sample luminescence was read using a Perkin-Elmer Envision plate reader.

SIGNAL TO BACKGROUND	
RVP 384-well Input (µl)	**Signal: Background**
20	4,285
10	2,171
5	1,358
2.5	397
1.25	237
0.63	105
0.31	46

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