TECH DATA SHEET

REPORTER VIRUS PARTICLES

DESCRIPTION	
Product	RVP-1101G, Chikungunya (CHIKV) Reporter Virus Particles (RVPs)
Lot	KG-628A
Strain	S27
Reporter	GFP
Size	1.0 mL/vial
Packaging	20% FBS/DMEM
Viral Titer	3.08 x 10^6 TU/ml†
Recommended Input	2.5µL per well (96-well plate) for ~20% infectivity in a flow assay*
Mycoplasma Test	Negative
Expiration Date	February 2026

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

* Determined in the HEK-293T cell line

Chikungunya RVPs are used to test the ability of serum, antibodies, and drugs to neutralize the infectivity of the Chikungunya virus. RVPs display antigenically correct envelope 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 envelope 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:

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

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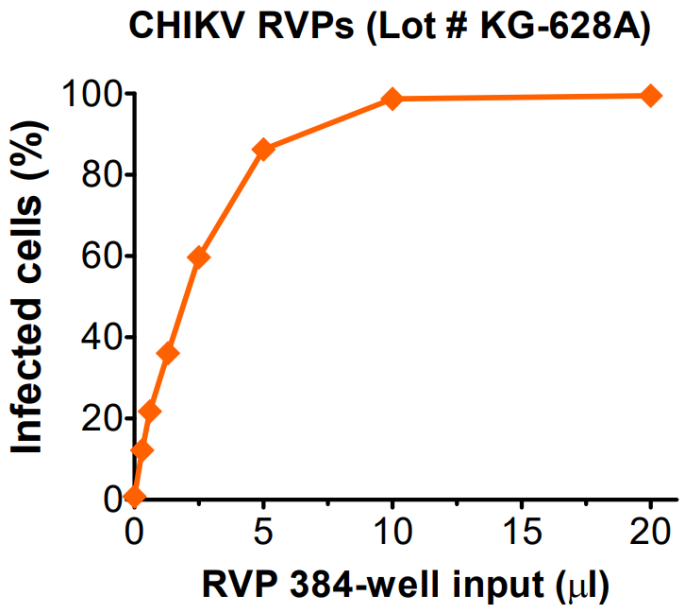
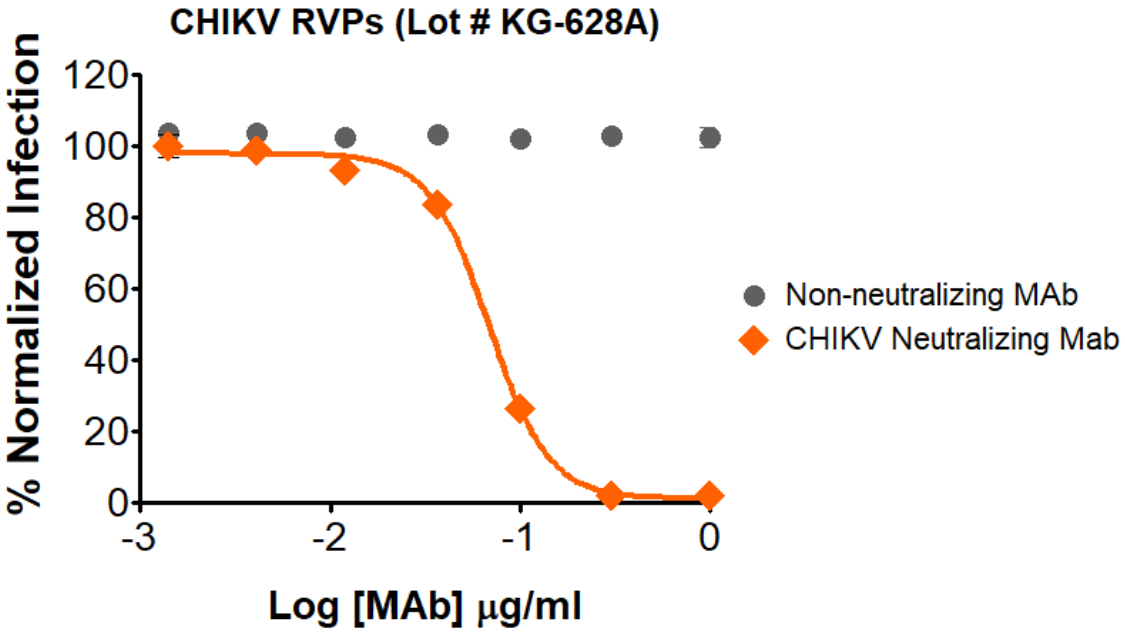
INFECTIVITY & NEUTRALIZATION DATA





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 CHIKV RVPs in a 384-well plate with Integral Molecular's monoclonal antibody (Cat# IM-CKV063). GFP positive cells were detected with an Intellicyt iQue flow cytometer using the BL-1 channel (Ex. 488 nm, Em. 530).