



TECH DATA SHEET

REPORTER VIRUS PARTICLES

DESCRIPTION

Product	RVP-101G, Dengue-1 (DENV 1) Reporter Virus Particles (RVPs)
Lot	DG-1056B
Strain	16007
Reporter	GFP
Size	1.0 mL/vial
Packaging	20% FBS/DMEM
Viral Titer	4.79×10^5 TU/ml†
Recommended Input	20µL per well (96-well plate) for ≥ 20% infectivity in a flow assay*
Mycoplasma Test	Negative
Expiration Date	April 2028

SAFETY & HANDLING

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

* Determined in the BHK DC-SIGN stable cell line.

DENV RVPs are used to assess the neutralizing activity of serum, antibodies, and antiviral compounds against viral infectivity. DENV RVPs are structurally intact Dengue virus-like particles, capable of a single round of infection and carry a genome that expresses either a GFP or luciferase optical reporter gene upon infection. DENV RVPs are produced in a HEK-293T-derived cell line using plasmids that encode DENV CprME structural genes and a Flavivirus reporter replicon.

RVPs are designed to have structural and antigenic equivalence to live viruses and are highly unlikely to recombine to produce a fully infectious virus. However, RVPs are derived from biological materials and should be handled with caution within a BSL2 laboratory environment. RVPs are not to be used in humans or in animals raised for food.

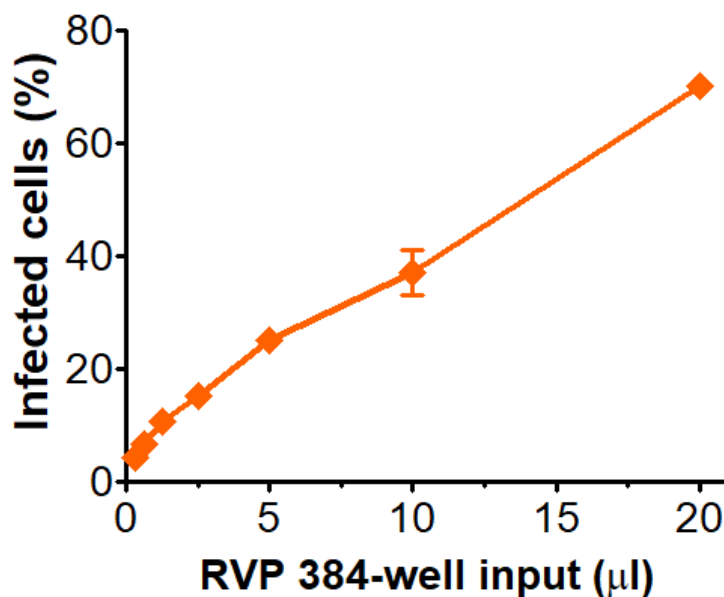
Thaw tubes in a 37°C water bath for 3 minutes and place on ice until ready to use. RVPs will appear as a translucent solution. Gently mix prior to use and pulse tube for 3 seconds at high speed in a tabletop microfuge to recover all volume from the tube. Vortexing of RVPs should be avoided. Re-freezing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

† Titer is calculated using the estimated number of cells at the end of the experiment, using the following equation:

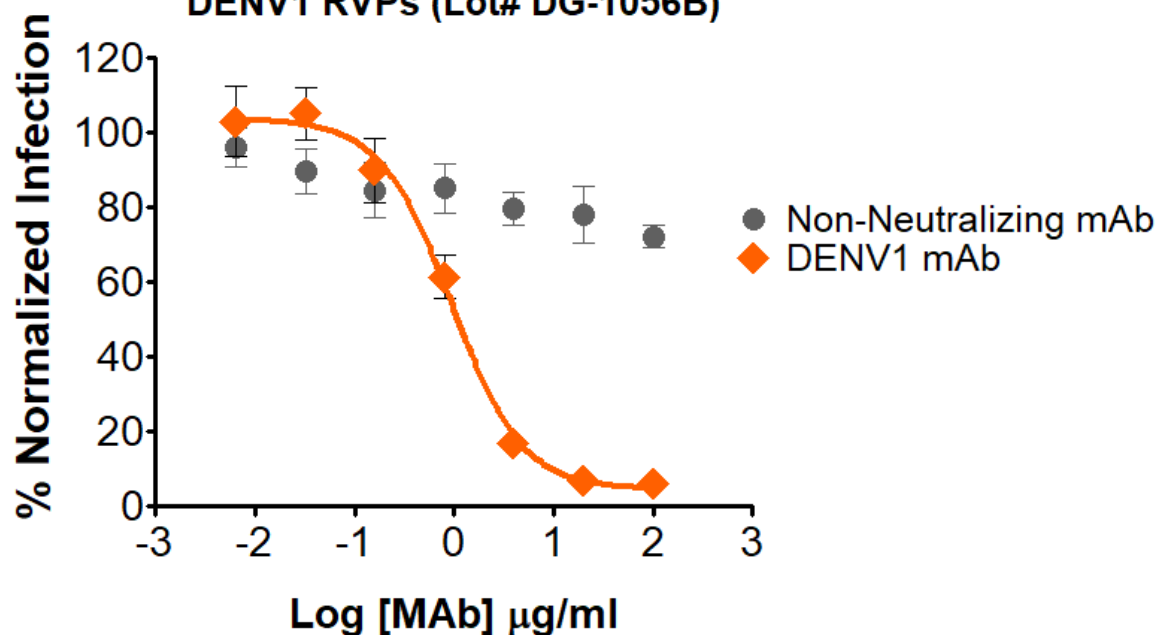
$$\left[\left(\frac{\% \text{ GFP positive cells}}{100} \right) \times \left(\frac{6,000 \text{ cells}}{1 \text{ well}} \right) \times \left(\frac{1 \text{ well}}{\text{RVP input } (\mu\text{L})} \right) \right] \times \frac{1000 \mu\text{L}}{1 \text{ mL}} = X \frac{\text{Transforming Units (TU)}}{\text{mL}}$$

INFECTIVITY AND NEUTRALIZATION DATA

DENV1 RVPs (Lot# DG-1056B)



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Infectivity and neutralization determined in BHK DC-SIGN cells (Integral Cat# C-BD101). Infectivity data represents the average of two independent vials, each tested in quadruplicate.

Neutralization (using monoclonal antibody 4G2) utilized 5 μl of DENV 1 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).