



# TECH DATA SHEET

## REPORTER VIRUS PARTICLES

### DESCRIPTION

<b>Product</b>	RVP-401L, Dengue-4 (DENV4) Reporter Virus Particles (RVPs)
<b>Lot</b>	DL-539B
<b>Strain</b>	TVP360
<b>Reporter</b>	<i>Renilla</i> luciferase
<b>Size</b>	1.0 mL/vial
<b>Packaging</b>	20% FBS/DMEM
<b>Recommended Input</b>	1 $\mu$ L per well (96-well plate) for a S:B > 200*
<b>Mycoplasma Test</b>	Negative
<b>Expiration Date</b>	June 2027

### SAFETY & HANDLING

<b>Shipping</b>	Shipped on dry ice
<b>Stability and Storage</b>	Store at $\leq -80^{\circ}\text{C}$

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

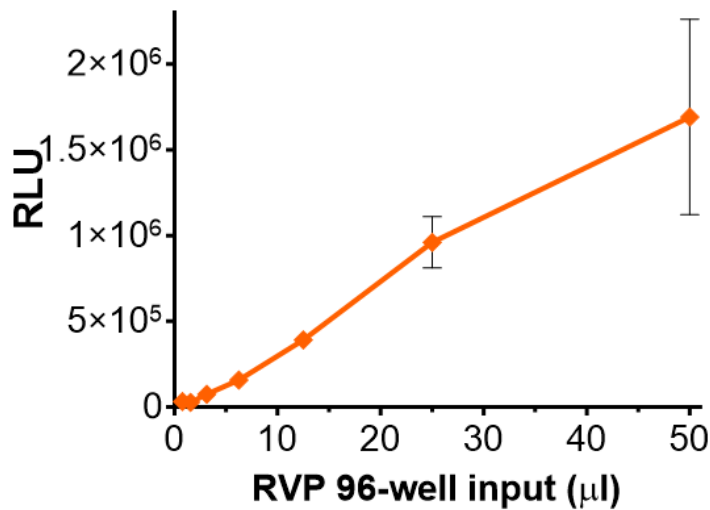
DENV RVPs are used to test the ability of serum, antibodies, and drugs to neutralize infectivity. DENV RVPs are structurally intact Dengue virus-like particles, capable of a single round of infection and carry a genome that expresses a luciferase optical reporter gene upon infection. RVPs are derived from a baby hamster kidney cell line (BHK-21) and are produced using 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.

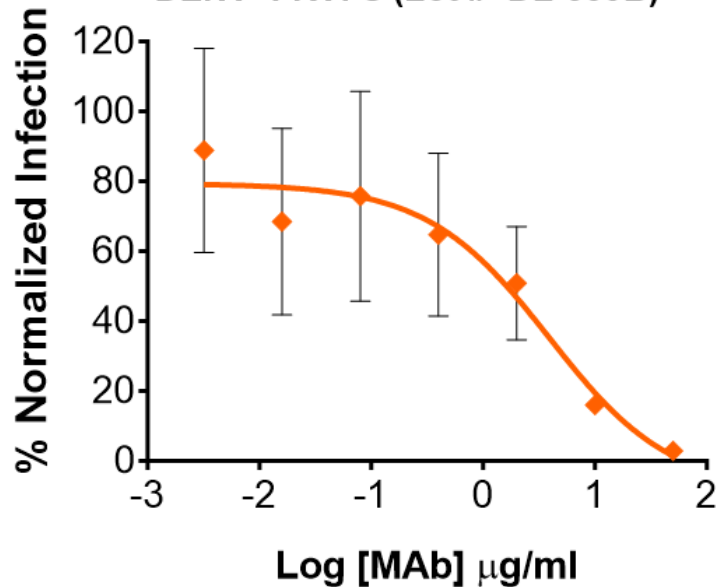
Thaw vial(s) in a 37°C water bath for 2-3 minutes and place on ice until ready to use. Gently mix prior to use and pulse vial for 3 seconds at high speed in a tabletop microfuge to recover all volume. Vortexing of RVPs should be avoided. Re-freezing of RVPs is not recommended.

## INFECTIVITY AND NEUTRALIZATION DATA

DENV-4 RVPs (Lot # DL-539B)



DENV-4 RVPs (Lot # DL-539B)



Infectivity determined in BHK DC-SIGN cells (Cat# C-BD101). Infectivity data represents the average of three independent vials, each tested in duplicate.

Neutralization (using a DENV-4 monoclonal antibody) utilized 5 μl of DENV RVPs in a 96-well plate. *Renilla* luciferase activity measured using the Promega *Renilla* luciferase assay system (Promega #E2810). Sample luminescence was read using a Perkin-Elmer Envision plate reader.

SIGNAL TO BACKGROUND	
RVP 96-well Input ( $\mu$ l)	Signal:Background
50	30,797
25	17,131
12.5	6,900
6.25	2,787
3.125	1,302
1.5625	481
0.78125	567

Signal to background is calculated using mock infected cells as the negative control value. Devices used to read luminescence will vary in relative light unit values based on their individual detectors and software, but the signal to background will be comparable across devices.