

## Data Sheet

### *Renilla Luciferase Lentivirus*

Catalog #: 79565-P

#### Product Description

The Renilla Luciferase Lentivirus are replication incompetent, HIV-based, VSV-G pseudotyped lentiviral particles that are ready to be transduced into almost all types of mammalian cells, including primary and non-dividing cells. The particles constitutively express Renilla luciferase under a CMV promoter (Figure 1).

#### Applications

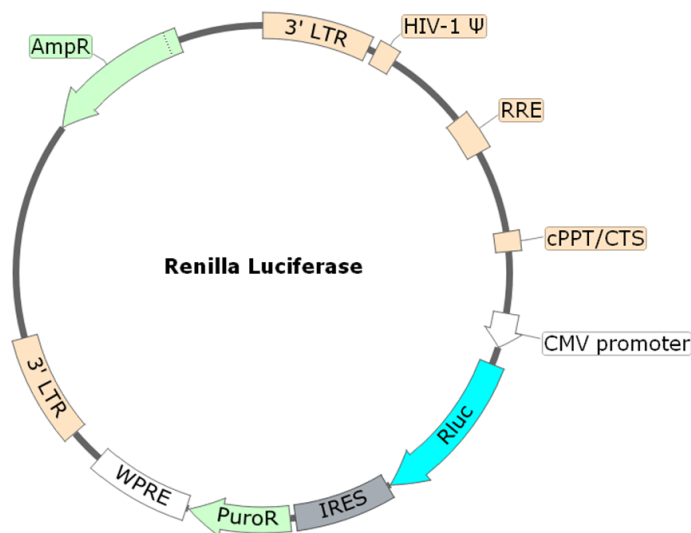
1. Useful as an internal control when performing TWO-step luciferase reporter assays to overcome sample-to-sample variability.
2. Generation of stable cell line expressing Renilla Luciferase with puromycin selection.

#### Formulation

The lentiviruses were produced from HEK293T cells in medium containing 90% DMEM + 10% FBS.

#### Titer

Two vials (500  $\mu$ l x 2) of Renilla luciferase lentivirus at a titer  $\geq 5 \times 10^6$  TU/ml. The titer will vary with each lot; the exact value is provided with each shipment.



**Figure 1. Schematic of the lenti-vector used to generate the Renilla lentivirus**

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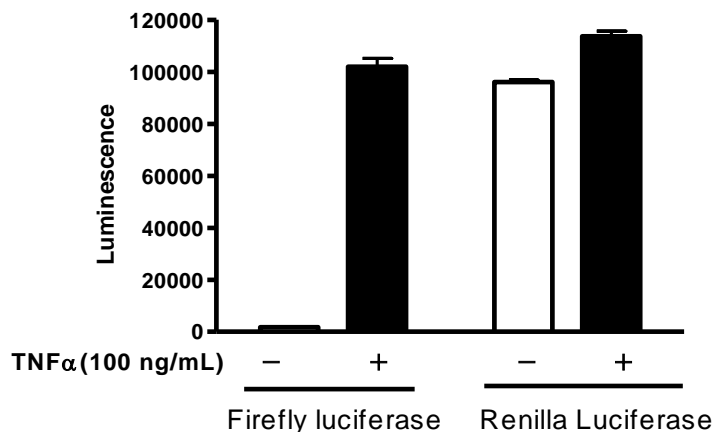
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### Storage

Lentiviruses are shipped with dry ice. For long term storage, it is recommended to store the virus at  $-80^{\circ}\text{C}$ . Avoid repeated freeze-thaw cycles. Titers can drop significantly with each freeze-thaw cycle.

### Biosafety

None of the HIV genes (gag, pol, rev) will be expressed in the transduced cells, as they are expressed from packaging plasmids lacking the packing signal. Although the pseudotyped lentiviruses are replication-incompetent, they require the use of a Biosafety Level 2 facility. BPS recommends following all local federal, state, and institutional regulations and using all appropriate safety precautions.



**Figure 2. NF- $\kappa$ B luciferase reporter activity stimulated by TNF $\alpha$  in HEK293 cells.** 10,000 HEK293 cells/well were transduced with 50,000 TU/well NF- $\kappa$ B luciferase reporter lentivirus and 50,000 TU/well RLuc lentivirus. After 48 hours of transduction, medium was changed to HEK growth medium. After 66 hours of transduction, cells were treated with 100 ng/mL of TNF $\alpha$  for ~6 hours. TWO-step luciferase assay was performed according to the recommended protocol (BPS Bioscience #60683). The results are shown as the raw luminescence reading of Firefly luciferase and Renilla luciferase, respectively. The normalized luciferase activity for the reporter was calculated as the ratio of Firefly luciferase luminescence to Renilla luciferase luminescence.

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## Related Products

<b><u>Product</u></b>	<b><u>Cat. #</u></b>	<b><u>Size</u></b>
NFκB Luciferase Reporter Lentivirus	79564	500 µl x2
CRE Luciferase Reporter Lentivirus	79580	500 µl x2
NFAT Luciferase Reporter Lentivirus	79579	500 µl x2
STAT3 Luciferase Reporter Lentivirus	79744	500 µl x2
STAT5 Luciferase Reporter Lentivirus	79745	500 µl x2
TCF/LEF Luciferase Reporter Lentivirus	79787	500 µl x2
ISRE Luciferase Reporter Lentivirus	79824	500 µl x2
IL-2 Promoter Luciferase Reporter Lentivirus	79825	500 µl x2
IL-8 Promoter Luciferase Reporter Lentivirus	79827	500 µl x2
AP-1 Luciferase Reporter Lentivirus	79823	500 µl x2
SBE Luciferase Reporter Lentivirus	79806	500 µl x2
TEAD Luciferase Reporter Lentivirus	79833	500 µl x2
ARE Luciferase Reporter Lentivirus	79869	500 µl x2
Negative Control Lentivirus	79578	500 µl x2
Renilla Luciferase (Rluc) Lentivirus	79565	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (G418)	79692-G	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (Hygromycin)	79692-H	500 µl x2
Firefly Luciferase (Fluc) Lentivirus (Puromycin)	79692-P	500 µl x2
FcERIIIA Lentivirus	79876	500 µl x2
FcGRIIB Lentivirus	79877	500 µl x2
FcER1G Lentivirus	79878	500 µl x2
Secreted Gaussia Luciferase Lentivirus	79892	500 µl x2
Non-secreted Gaussia Luciferase Lentivirus	79893	500 µl x2
Expression Negative Control Lentivirus	79902	500 µl x2
TCR Activator Lentivirus	79894	500 µl x2
ONE-Step™ Luciferase Assay System	60690-1	10 ml
TWO-Step Luciferase (Firefly & Renilla) Assay System	60683	10 ml

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