



## Data Sheet • Firefly Luciferase Lentifact™ Lentiviral Particles • Cat Nos. LP-FLUC-LV105-0200, LP-FLUC-LV105-0205

Ready-to-use lentiviral particles for the transduction of a variety of mammalian cells including difficult-to-transfect, primary, stem and non-dividing cells as well as in vivo use for transgenic animals.

### Description

GeneCopoeia Lentifact™ Lentiviral Particles are produced from a standardized protocol using purified plasmid DNA and the proprietary reagents, EndoFectin™ Lenti (for transfection) and TiterBoost™ solution. The protocol uses a third generation self-inactivating packaging system meeting BioSafety Level 2 requirements.

The Lentifact particles include a CMV promoter for efficient expression of non-tagged, firefly luciferase in target cells and use a **puromycin resistance marker** for selection of stably transduced cells.

### Contents and storage

Provided as 1 vial of 200 µl or 5 vials of 200 µl of firefly luciferase lentiviral particles with titers of  $\sim 1 \times 10^8$  copies/ml.

Lentifact particles are shipped on dry ice and **must be stored at  $-80^\circ\text{C}$  immediately upon receipt**. Avoid repeated freeze-thaw cycles as this will reduce titers.

### Quality control

The lentiviral expression construct was validated by full-length sequencing, restriction enzyme digestion and PCR-size validation using gene-specific and vector-specific primers. Product is confirmed free of bacteria, fungi and common *Mycoplasma* contamination.

### Viral titer

Lentivirus products were titrated using qRT-PCR, which determines the physical copy numbers of viral genomic RNA. We suggest that the customer estimate the transduction unit (TU or IFU) for the specific host cells based on the following formula before transduction:

$\text{TU} = \text{Titer (physical copy number)} / 100$ .

The customer should test the transduction at MOI=0.3, 1, 3, 5, 10 using TU for the best transduction efficiency.

### Overview of production

The firefly luciferase OmicsLink™ ORF lentiviral expression plasmid (GeneCopoeia Cat. No. EX-hLUC-Lv105) was constructed using GeneCopoeia proprietary RecJoin™ technology. This plasmid was co-transfected into 293Ta cells (GeneCopoeia Cat. No. CLv-PK-01) with the Lenti-Pac HIV Packaging Mix (GeneCopoeia Cat. No. HPK-LvTR-20). Lentivirus-containing supernatants were harvested 48 hours after transfection and stored at  $-80^\circ\text{C}$ .

### User manual

Please contact GeneCopoeia for a copy or download at:

[http://genecopoeia.com/product/lentiviral/pdf/packaging\\_kit\\_manual.pdf](http://genecopoeia.com/product/lentiviral/pdf/packaging_kit_manual.pdf)

GeneCopoeia, Inc.  
9620 Medical Center Drive, #101  
Rockville, Maryland 20850  
Tel: 301-762-0888 Fax: 301-762-8333  
Email: [inquiry@genecopoeia.com](mailto:inquiry@genecopoeia.com)  
Web: [www.genecopoeia.com](http://www.genecopoeia.com)