GFP Lentivirus Control

CATALOG NUMBER: LTV-300 **STORAGE:** -80 °C, Avoid repeat freeze/thaw cycles

QUANTITY AND CONCENTRATION: 200 µL, >1 x 10^6 TU/mL in DMEM, 10% FBS, Pen-Strep

Background

Lentivirus vector based on the human immunodeficiency virus-1 (HIV-1) has become a promising vector for gene transfer studies. The advantageous feature of lentivirus vector is the ability of gene transfer and integration into dividing and non-dividing cells. The pseudotyped envelope with vesicular stomatitis virus envelope G (VSV-G) protein broadens the target cell range. Lentiviral vectors have been shown to deliver genes to neurons, lymphocytes and macrophages, cell types that previous retrovirus vectors could not be used. Lentiviral vectors have also proven to be effective in transducing brain, liver, muscle, and retina *in vivo* without toxicity or immune responses. Recently, the lentivirus system is widely used to integrate siRNA efficiently in a wide variety of cell lines and primary cells both *in vitro* and *in vivo*.

The provided GFP lentivirus control is a VSVG-pseudotyped pantropic virus capable of infecting both dividing and non-dividing cells. The virus contains GFP (Figure 1), providing a useful control for transduction. This control virus can also be used to generate GFP stable cell lines, and stable clones can be selected by green fluorescence sorting.

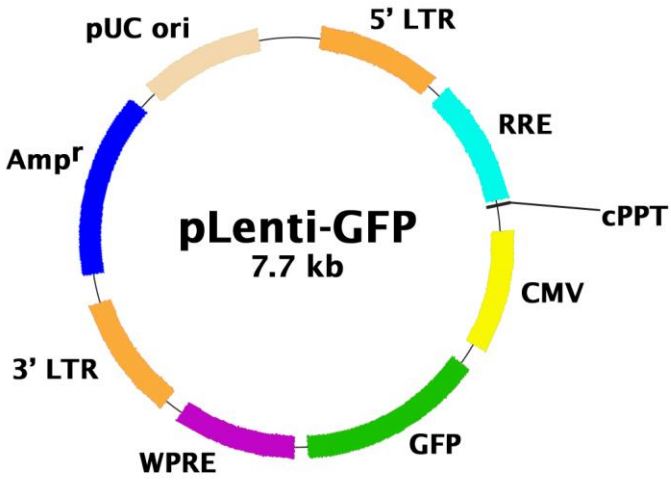

Figure 1. Schematic representation of GFP lentivirus expression vector.

Quality Control

This vial contains 200 µL of control GFP supernatant with p24 level of 1 ug/mL (particle titer) as determined by a p24 ELISA kit (Cat.# VPK-108-HIV p24) and at least 1.0×10^6 TU/mL (infectious titer) as determined by green fluorescence of infected 293 cells (Figure 2).

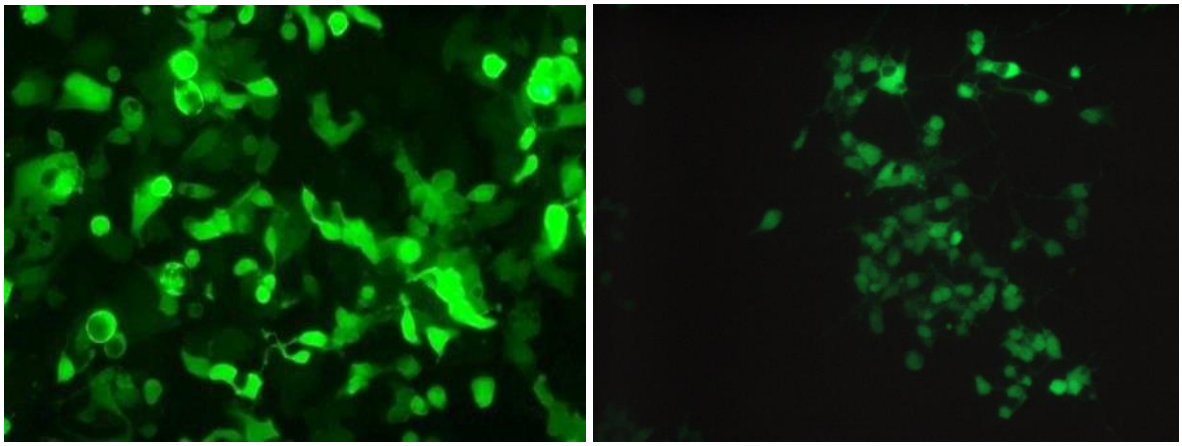

Figure 2: GFP Expression in 293 cells: 293 cells are seeded at 100,000 cells/well in a 6-well plate overnight. Cells were infected with GFP lentivirus in the presence of 8 µg/mL Polybrene for 72 hrs.

Safety Considerations

Remember that you will be working with samples containing infectious virus. Follow the recommended NIH guidelines for all materials containing BSL-2 organisms. Precautions must be taken to avoid direct contact with viral supernatants.

References

1. Naldini, L., U. Blomer, P. Gallay, D. Ory, R. Mulligan, F. H. Gage, I. M. Verma, and D. Trono (1996) *Science* **272**, 263-267.
2. Verma, I. M., and N. Somia **(**1997) *Nature* **389**, 239-242
3. Kahl C. A., Marsh J., Fyffe J., Sanders D. A., and K. Cornetta (2004) *J Virol.* **78**:1421-30.
4. White S. M., Renda M., Nam N. Y., Klimatcheva E., Zhu Y., Fisk J., Halterman M., Rimel B. J., Federoff H., Pandya S., Rosenblatt J. D., and V. Planelles (1999) *J Virol.* **73**:2832-40.
5. Kafri T., van Praag H., Ouyang L., Gage F. H., and I. M. Verma (1999) *J Virol.* **73**:576-84.

Recent Product Citation

1. Li, D.W., et al. (2017). Silk fibroin/chitosan scaffold with tunable properties and low inflammatory response assists the differentiation of bone marrow mesenchymal stem cells. Int J Biol Macromol. pii: S0141-8130(17)31649-5. doi: 10.1016/j.ijbiomac.2017.07.080
2. Selenica, M. B. et al. (2016). Adeno associated viral-mediated intraosseous labeling of bone marrow derived cells for CNS tracking. *J Immunol Methods.* doi:10.1016/j.jim.2016.01.008.

Warranty

These products are warranted to perform as described in their labeling and in Cell Biolabs literature when used in accordance with their instructions. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THIS EXPRESSED WARRANTY AND CELL BIOLABS DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR PARTICULAR PURPOSE. CELL BIOLABS *'s* sole obligation and purchaser's exclusive remedy for breach of this warranty shall be, at the option of CELL BIOLABS, to repair or replace the products. In no event shall CELL BIOLABS be liable for any proximate, incidental or consequential damages in connection with the products.

This product is for RESEARCH USE ONLY; not for use in diagnostic procedures.

Contact Information

Cell Biolabs, Inc.
7758 Arjons Drive
San Diego, CA 92126
Worldwide: +1 858-271-6500
USA Toll-Free: 1-888-CBL-0505
E-mail: tech@cellbiolabs.com
www.cellbiolabs.com