

Description

The STAT3 eGFP Reporter Lentiviruses 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 contain an eGFP gene under the control of a STAT3-responsive element located upstream of the minimal TATA promoter (Figure 1). After transduction, activation of the STAT3 signaling pathway in the target cells can be monitored by examining eGFP expression.

Application

- Screen for activators or inhibitors of the STAT3 signaling pathway in transduced target cells
- Generation of STAT3 eGFP reporter stable cell line

Formulation

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

Titer

Two vials (500 μ l x 2) of STAT3 eGFP lentivirus at a titer $\geq 10^7$ TU/ml. The titer will vary with each lot; the exact value is provided with each shipment.

Storage

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

Biosafety

The lentiviruses are produced with the third-generation SIN (self-inactivation) lentivector which ensures self-inactivation of the lentiviral construct after transduction and integration into the genomic DNA of the target cells. 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.

Materials Required but Not Supplied

These materials are not supplied with this lentivirus but are necessary to follow the designed protocol. BPS Bioscience media and reagents are all validated and optimized for use with this lentivirus and are highly recommended for best results.

Name	Ordering Information
Human IL-6	BPS Bioscience, #90196-B
Thaw Medium 9	BPS Bioscience, #79665
Polybrene	Millipore, #TR-1003-G
96-well tissue culture treated white clear-bottom assay plate	Corning, #3610
ONE-Step™ Luciferase assay system	BPS Bioscience, #60690
Luminometer	

License Disclosure

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Troubleshooting Guide

Visit bpsbioscience.com/lentivirus-faq for detailed troubleshooting instructions. For all further questions, please email support@bpsbioscience.com.

Figures and Validation Data

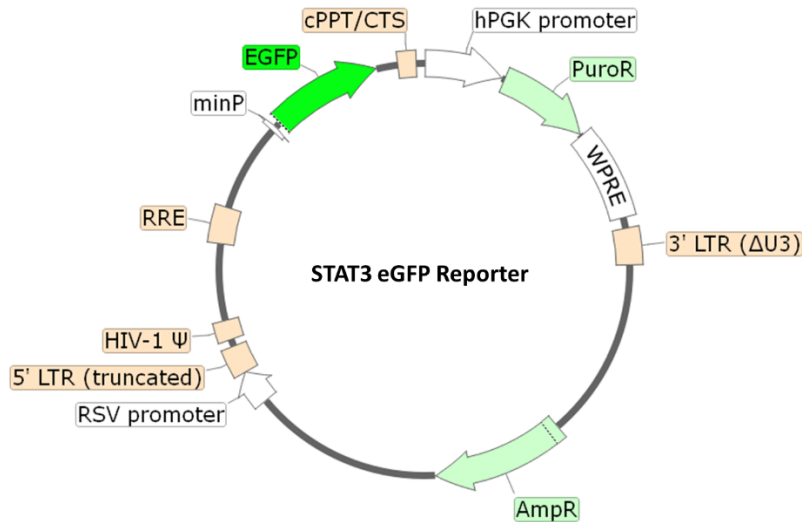


Figure 1. Schematic of the lenti-vector used to generate the STAT3 eGFP reporter lentivirus

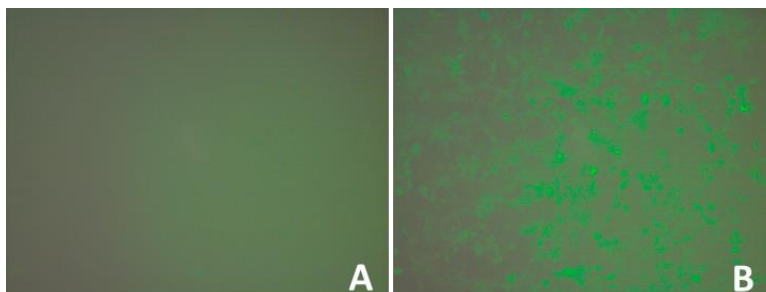


Figure 2. STAT3 eGFP reporter activity stimulated by IL-6 in HEK293 cells. Approximately 5,000 HEK293 cells/well were seeded and transduced on the same day with STAT3 eGFP reporter lentivirus at 200,000 TU/well. After 48 hours of transduction, medium was changed to fresh Thaw Medium 9, and the cells were treated with 20 ng/ml IL-6 for 24 hours. The expression of eGFP in the target cells was observed under a fluorescence microscope (Ex/Em=488/510 nm). A, HEK293 cells transduced with STAT3 eGFP reporter lentivirus, without IL-6 treatment; B, HEK293 cells transduced with STAT3 eGFP reporter and treated with 20 ng/ml IL-6.

Related Products

<i>Products</i>	<i>Catalog #</i>	<i>Size</i>
Negative control eGFP Reporter Lentivirus	79927	500 μ l x 2
NF- κ B eGFP Reporter Lentivirus	79926	500 μ l x 2
NFAT eGFP Reporter Lentivirus	79922	500 μ l x 2
CRE eGFP Reporter Lentivirus	78153	500 μ l x 2
STAT3 Luciferase Reporter Lentivirus	79744	500 μ l x 2
eGFP Lentivirus	79979	500 μ l x 2
Firefly Luciferase-eGFP Lentivirus	79980	500 μ l x 2
Thaw Medium 9	79665	100 ml