

pLVX-EF1 α -IRES-ZsGreen1 Vector

Catalog No.

631982

Amount10 μ g**Lot Number**

Specified on product label.

Description

pLVX-EF1 α -IRES-ZsGreen1 is a bicistronic lentiviral expression vector that can be used to generate high-titer lentivirus for transducing virtually any dividing or nondividing mammalian cell type, including primary and stem cells. The vector contains an internal ribosomal entry site (IRES) that allows a gene-of-interest and the ZsGreen1 fluorescent protein to be simultaneously coexpressed from a single mRNA transcript. Expression of the transcript is driven by the human elongation factor 1 alpha (EF1 α) promoter, which continues to be constitutively active even after stable integration of the vector into the host cell genome. Stable expression of the transcript allows the monitoring of a variety of cellular processes (such as differentiation in primary or stem cells) without the transgene silencing associated with CMV promoters. In addition, the vector allows efficient flow cytometric detection of stably or transiently transfected mammalian cells expressing ZsGreen1 and a protein of interest, without time-consuming drug and clonal selection.

Package Contents

- 20 μ l pLVX-EF1 α -IRES-ZsGreen1 Vector

Storage Conditions

- Store plasmids at -20°C .
- Spin briefly to recover contents.
- Avoid repeated freeze/thaw cycles.

Expiration Date

- Specified on product label.

Storage Buffer

- 10 mM Tris-HCl (pH 8.0), 1 mM EDTA (pH 8.0)

Concentration

- 500 ng/ μ l

Shipping Conditions

- Dry ice

Product Documents

Documents for our products are available for download at takarabio.com/manuals

The following documents apply to this product:

- Lenti-XTM Lentiviral Expression Systems User Manual
- pLVX-EF1 α -IRES-ZsGreen1 Vector Information

Takara Bio USA, Inc.

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Certificate of Analysis

Cat. No. 631982

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Propagation in *E. coli*

- Suitable host strains: DH5 α and other general-purpose strains
- Selectable marker: plasmid confers resistance to ampicillin (100 μ g/ml) in *E. coli* hosts
- *E. coli* replication origin: pUC
- Copy number: high

Excitation and Emission Maxima of ZsGreen1

- Excitation: 493 nm
- Emission: 505 nm

Additional Information

pLVX-EF1 α -IRES2-ZsGreen1 can be used to quickly identify cells expressing a gene of interest by screening for ZsGreen1 fluorescence. Genes inserted into the MCS must contain a start codon (ATG) and a stop codon.

Before the vector can be transduced into target cells, it must be packaged into viral particles in HEK293T cells, using our Lenti-X Packaging Single Shots (VSV-G) (Cat.Nos. 631275 & 631276). This packaging system allows the safe production of high titer, infectious, replication-incompetent, VSV-G pseudotyped lentiviral particles that can infect a wide range of cell types, including nondividing and primary cells.

Caution! The viral supernatants produced by this lentiviral vector could contain potentially hazardous recombinant virus. Due caution must be exercised in the production and handling of recombinant lentivirus. Appropriate NIH, regional, and institutional guidelines apply.

Quality Control Data

Plasmid Identity & Purity

- Digestion with the indicated restriction enzymes produced fragments of the indicated sizes on a 0.8% agarose/EtBr gel:

Vector	Enzymes	Fragments
pLVX-EF1 α -IRES-ZsGreen1	BamHI	8.9 kb
	Acc65I	1.6 & 7.3 kb

- Vector identity was confirmed by sequencing.
- A₂₆₀/A₂₈₀: 1.8–2.0

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

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NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval.

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