

## pMXs-GFP/Puro Retroviral Vector

**CATALOG NUMBER:** RTV-053

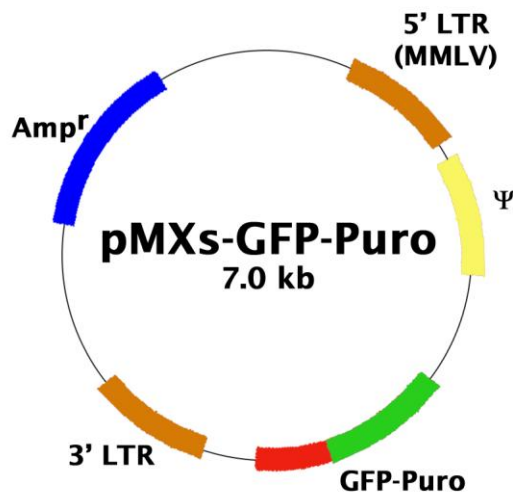
**STORAGE:** -20°C

**QUANTITY AND CONCENTRATION:** 10 µg at 0.25 µg/µL in TE

### **Background**

Retroviruses are efficient tools for delivering heritable genes into the genome of dividing cells. Cell Biolabs' pMXs-GFP/Puro retroviral vector is based on Moloney murine leukemia virus (MMLV). The vector provides the viral package signal, transcription and processing elements. The viral *env* gene, produced by the package cell line, encodes the envelope protein, which determines the viral infectivity range. Transfection into a package cell line produces high-titer, replication-incompetent viruses. In addition to transfer and expression of exogenous genes in mammalian cells, recently, retroviruses have been used to express silencing RNAs (siRNA) to decrease the expression of target genes both *in vitro* and *in vivo*.

The vector contains the ampicillin-resistance gene, MMLV LTRs, package signal and GFP-Puro fusion insert (Figure 1).



**Figure 1.** Schematic representation of pMXs-GFP/Puro retroviral vector.

### **Safety Consideration**

Remember that you will be working with samples containing infectious virus. Follow the recommended NIH guidelines for all materials containing BSL-2 organisms. Always wear gloves, use filtered tips and work under a biosafety hood.

## **References**

Onishi, M., Kinoshita, S., Morikawa, Y., *et al.*, (1996) *Exp. Hematol.* **24**, 324-327.

## **Recent Product Citations**

1. Sanchez-Mata, A. et al. (2020). Protocol to Reprogram Human Menstrual Blood-Derived Stromal Cells to Generate AOX15-iPSCs. *STAR Protoc.* doi: 10.1016/j.xpro.2020.100183.
2. Huang, L. et al. (2017). Retinoid acid and taurine promote NeuroD1-induced differentiation of induced pluripotent stem cells into retinal ganglion cells. *Mol Cell Biochem.* doi: 10.1007/s11010-017-3114-x.

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

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