

pMXs-IRES-Blasticidin Retroviral Vector

CATALOG NUMBER: RTV-016

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-IRES-Blasticidin retroviral vector (also known as pMXs-IB) is based on Moloney murine leukemia virus (MMLV). The vector provides the viral package signal, transcription and processing elements, and MCS for cloning of a target gene. 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 MCS for cloning of your gene of interest (Figure 1).

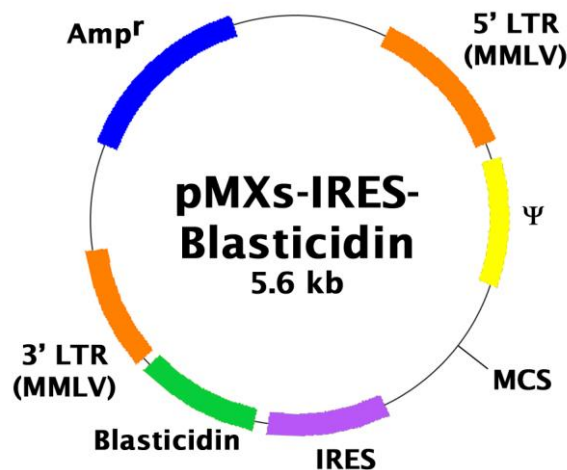


Figure 1. Schematic representation of pMXs-IRES-Blasticidin retroviral vector.

MCS:

- Enzyme Sites: 5'-BamHI, EcoRI, XhoI, NotI, SnaBI-3'
- MCS Sequence:

TTAATTAAGGATCCCAGTGTGGTGGTACGGGAATTCCTGCAGGCCTCGAGGGCCGGC
GCGCCGCGCCGCTACGTAAATT

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.

Reference

Kitamura T., *et al.*, (2003) *Exp. Hematol.* **31**, 1007-1014.

Recent Product Citations

1. Take, K., *et al.* (2017). CDK5 Regulatory Subunit-Associated Protein 1-like 1 Negatively Regulates Adipocyte Differentiation through Activation of Wnt Signaling Pathway. *Sci Rep.* **7**(1):7326. doi: 10.1038/s41598-017-06469-5.
2. Law, M. E. *et al.* (2016). CUB domain-containing protein 1 and the epidermal growth factor receptor cooperate to induce cell detachment. *Breast Cancer Res.* **18**:80.
3. Saito, A. *et al.* (2016). Roles of capsid-interacting host factors in multimodal inhibition of HIV-1 by PF74. *Jf Virol.* doi:10.1128/JVI.03116-15.
4. Peking, P. *et al.* (2016). A gene gun-mediated nonviral RNA trans-splicing strategy for Col7a1 repair. *Mol Ther Nucleic Acids.* doi:10.1038/mtna.2016.3.
5. Sotillo, E. *et al.* (2015). Convergence of acquired mutations and alternative splicing of CD19 enables resistance to CART-19 immunotherapy. *Cancer Discov.* **5**:1282-1295.
6. Greil, C. *et al.* (2015). The role of APC/CCdh1 in replication stress and origin of genomic instability. *Oncogene.* doi:10.1038/onc.2015.367.
7. Choi, Y. A. *et al.* (2014). Bobby Sox homology regulates odontoblast differentiation of human dental pulp stem cells/progenitors. *Cell Commun Signal.* **12**:35.
8. Papatheodorou, P. *et al.* (2011). Lipolysis-stimulated lipoprotein receptor (LSR) is the host receptor for the binary toxin clostridium difficile transferase (CDT). *PNAS* **108**: 16422-16427.
9. Sugatani, T. *et al.* (2011). A microRNA expression signature of osteoclastogenesis. *Blood* **117**:3648-3657.

License Information

This product is licensed from the University of Tokyo.

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

©2008-2016: Cell Biolabs, Inc. - All rights reserved. No part of these works may be reproduced in any form without permissions in writing.