

pBABE-Puro Retroviral Vector

CATALOG NUMBER: RTV-001-PURO

STORAGE: -20°C

QUANTITY AND CONCENTRATION: 10 µg at 0.5 µg/µL in TE

Background

Retroviruses are efficient tools for delivering heritable genes into the genome of dividing cells. Cell Biolabs' retrovirus vector is based on the pBABE vector system, which is derived from Moloney murine leukemia virus (MMLV). The vector provides the viral package signal, transcription and processing elements, and 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 are used to express silencing RNAs (siRNA) to decrease the expression of target genes both *in vitro* and *in vivo*.

The vector contains the bacterial origin of replication, ampicillin-resistance gene, and puromycin-resistance gene for the growth of infected mammalian cells to select stable cell lines (Figure 1).

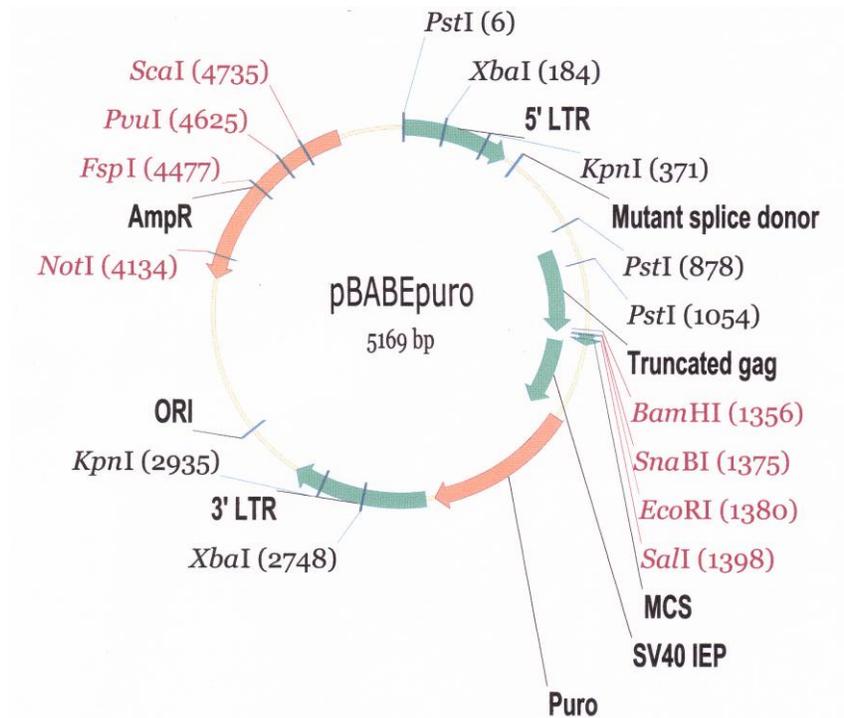


Figure 1. pBABE-Puro Retroviral Vector Map

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

1. Morgenstern, J. P. and H Land. (1990) *Nuc. Acid Res.* 18, 3587-3596.
2. Coffin, J. M. and H. E. Varmus, *Retroviruses*, Cold Spring Harbor Press, NY.
3. Schuck S, Manninen A, Honsho M, Fullekrug J and Simons K. (2004) *Proc Natl Acad Sci U S A.* 101, 4912-4917.

Recent Product Citations

1. Ramos-Montoya, A. et al. (2014). HES6 Drives a Critical AR Transcriptional Programme to Induce Castration-Resistant Prostate Cancer Through Activation of an E2F1-Mediated Cell Cycle Network. *EMBO Mol Med.* 6:651-661.
2. Pagnon, J. et al. (2012). Identification and Functional Characterization of Protein Kinase A Phosphorylation Sites in the Major Lipolytic Protein, Adipose Triglyceride Lipase. *Endocrinology.* 153:4278-4289.
3. Zheng, Yu et al. (2012). Protein-Tyrosine Kinase 6 Promotes Peripheral Adhesion Complex Formation and Cell Migration by Phosphorylating p130 CRK-associated Substrate. *J. Biol. Chem.* 287:148-158.
4. Jeong, H. et al. (2010). TAZ as a Novel Enhancer of MyoD-Mediated Myogenic Differentiation. *FASEB J.* 10.1096/fj.09-151324.

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