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pCLNCX Retrovirus Expression Vector

Catalog No.: NBP2-29502

Contents: 10 µg in 20 µl 1x TE (10 mM Tris, pH 7.5, 1 mM EDTA)

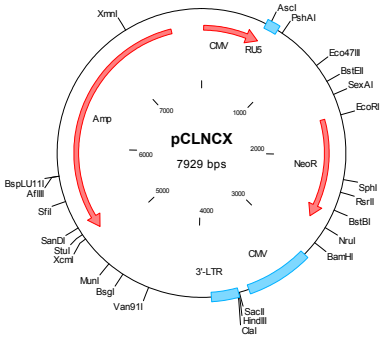
BACKGROUND:

The pCLNCX expression vector is a part of the RetroMax expression system (Cat# NBP2-29499) and has been designed to maximize recombinant–retrovirus titers in a simple, efficient, and flexible experimental system. All members of the RetroMax expression vector family (pCLXSN, pCLNCX, pCLNRX, and pCLNDX) have an extended packaging signal (ψ+) and are derived from safety-modified retrovirus vectors in which the *gag* open reading frame has been stopped by a point mutation (1), thereby minimizing the opportunity for replication competent retrovirus production by recombination with packaging genome.

The RetroMax system is designed for maximal virus titer in 293 cells. It takes advantages of two properties of 293 cells, i) high level of transfectibility, ii) strong E1A-mediated stimulation of CMV promoter controlled transcription. 293 cells are of nonmurine origin, hence the problem of **selective packaging and transfer of VL30 genomes (present in all murine packaging cells) are avoided.** Vector supernatants are free of helper virus and are of sufficiently high titer within 2 days of transient transfection in 293 cells to permit infection of more than 50% of dividing target cells in culture.

STORAGE:

For long-term storage, store at –20°C. For amplification, transform DH-5a or similar bacteria and plate on LB plates containing 50 mg/ml ampicillin.



Schematic presentation of pCLNCX vector: CMV immediate early promoter/enhancer allows high-efficiency transcription in 293 cells. However, this is lost during viral replication. Hence, the gene of interest cloned into ***Eco RI*** cloning site is driven by Moloney MLV and murine sarcoma virus LTR (RU5). For expression under the control of CMV early promoter/enhancer, the gene of interest should be cloned into ***Hind III*** or ***Cla I*** site.

REFERENCES:

1. Naviaux, RK, Costanzi, E, Haas, M and Verma, I. The pCL vector system: Rapid production of helper-free, high titer, recombinant retroviruses. *J. Virol* 70: 5701-5705 (1996).

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