

pCMV-10A1 Envelope Vector

CATALOG NUMBER: RV-114

STORAGE: -80°C

QUANTITY AND CONCENTRATION: 100 µL of bacterial glycerol stock

Background

Retroviruses are efficient tools for delivering heritable genes into the genome of dividing cells. The ecotropic, amphotropic and 10A1 envelope proteins are all natural MMLV variants, and are all relatively labile and thus considered relatively safe compared with other viral systems such as VSVG. Retrovirus expressing different envelope proteins can have different host cell ranges (see Table1).

	Eco	Ampho	10A1	VSVG
Human	–	+	+	+
Mouse	+	+	+	+
Rat	+	+	+	+
Hamster	–	+/-	+	+
Mink	–	+	+	+
Cat	–	+	+	+
Dog	–	+	+	+
Monkey	–	+	+	+
Avian	-	-	-	+
Fish	-	-	-	+
Insect	-	-	-	+

Table 1. Host cell range of virus pseudotyped with different envelope proteins.

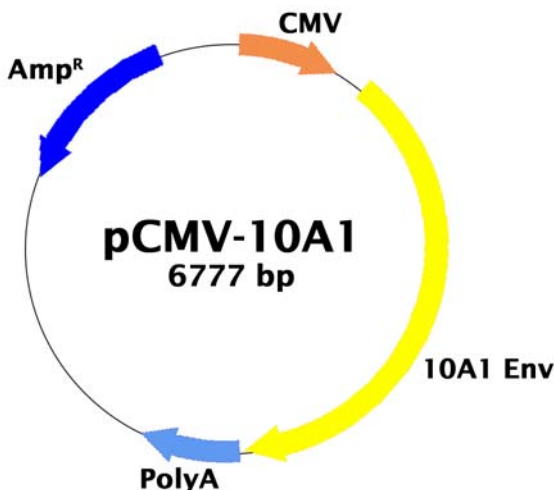


Figure 1. Schematic representation of pCMV-10A1 envelope vector.

pCMV-10A1 expresses the 10A1 envelope protein under the control of the CMV immediate-early promoter. The vector contains the ampicillin-resistance gene for propagation and antibiotic selection in bacteria (Figure 1).

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. Emi, N., *et al.*, (1991) *J. Virol.* **65**, 1202-1207.

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