Vankyrin-Enhanced Baculovirus Transfer Vector: pAcVE1

Cat. No.: 20010 Quantity: 10µg Storage: -20°C

Description

ParaTechs' pAcVE1 baculovirus transfer vector is designed for high level expression of foreign genes under the control of the Autographa californica nuclear polyhedrosis virus (AcMNPV) polyhedrin promoter. Increased recombinant protein production over conventional baculovirus transfer vectors is achieved by allowing co-expression of foreign genes with a vankyrin expression cassette (Fath-Goodin et al., 2006). pAcVE1 is derived from the pUC57 vector. Foreign genes may be cloned into the multiple cloning site utilizing the following restriction sites: AvrII; SbfI; XhoI; BglII; EagI; NotI; NheI. pAcVE1 baculovirus transfer vector is a polyhedrin locus-based transfer vector that is compatible with any baculovirus system that utilizes homologous recombination in insect cells, including flashBac (Oxford Expression Technologies) and Bac-N-Blue (Invitrogen).

Contents

The plasmid DNA was prepared on a silicon bead matrix and dissolved in TE buffer (10mM Tris-HCl, pH7.5; 1 mM EDTA). pAcVE1 baculovirus transfer vector is provided at 10 µg in 20 µl.

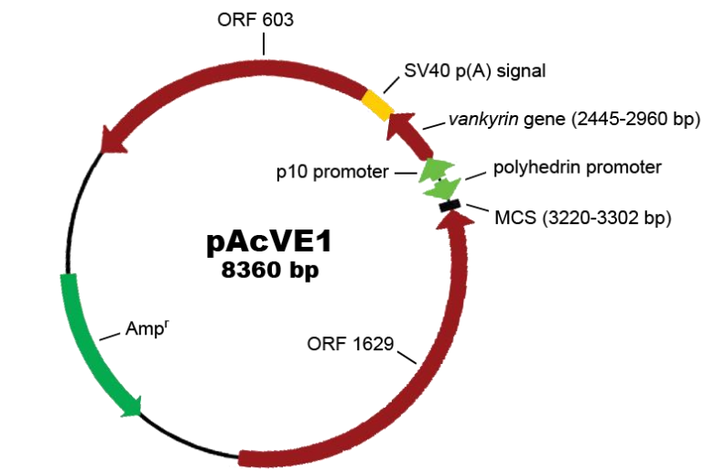
Storage

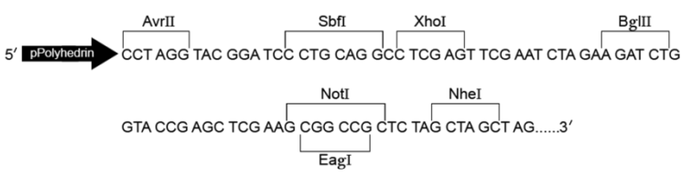
Transfer vector should be placed at -20^0 C for long- term storage.

Handling

For expression of recombinant protein under the polyhedrin promoter, the gene of interest should be ligated into an appropriate restriction site in the multiple cloning site of the pAcVE1 vector (see below). Transform the recombinant pAcVE1 transfer vector in *E. coli* cells (Top10 or any other suitable strain), propagate the cells under ampicillin selection and purify the recombinant plasmid using standard plasmid purification protocols. For construction of recombinant AcMNPV virus perform a co-transfection of the purified recombinant pAcVE1 vector with linearized baculovirus DNA suitable for homologous recombination in insect cells.

pAcVE1 Vector Map and Multiple Cloning Site





Unique Restriction Sites

AgeI AlwNI ApaI AscI AvrII BglII BsaAI Bsp120I BssHII BstAPI BstXI ClaI DraII EagI EcoNI EcoRI FspAI MscI NaeI NdeI Ngo MIV NheI NotI NruI PacI PfoI SbfI SgrAI SmaI SnaBI SpeI StyI SwaI XhoI XmaI

Absent Restriction Sites

AflII BclI BlpI BsiWI BstEII BstZ17I Bsu36I DraIII FseI MboI NcoI PflMI PmeI PmlI PpuMI PshAI RsrII SacII SanDI SexAI SfiI SgfI SrfI Tth111I XcmI

ParaTechs' Related Products

Product Name	Catalog No.
VE Insect Cell Line 01	10010
VE Insect Cell Line 02	10020
VE Insect Cell Line 03	10030

For further information on other ParaTechs products contact our Technical Services at info@paratechs.com or call (859) 317-9213. See also our web-site at www.paratechs.com.

References

Fath-Goodin, A., Kroemer, J.A., Martin, S.B., Reeves, K., and Webb, B.A. (2006). Polydnavirus genes that

enhance the Baculovirus Expression Vector System. Advances in Virus Research, vol. 68, pp. 75-90.

Kroemer, J.A. and Webb, B.A. (2006). Divergences in protein activity and cellular localization within the *Campoletis sonorensis* ichnovirus vankyrin family. Journal of Virology, 80 (24): 12219-12228.

Vaughn, J.L., Goodwin, R.H., Tompkins, G.J. and McCawley, P. (1977). The establishment of two cell lines from the insect *Spodoptera fugiperda* (Lepidoptera: Noctuidae).

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Patent information: United States Patent 7,629,160

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