

Technical Data Sheet

pAcSG2 Baculovirus Transfer Vector**Product Information**

Material Number: 554769
Size: 5 µg in 50 µl

Description

The pAcSG2 vector is a streamlined derivative of pVL941. It contains the essential parts of the polyhedrin gene locus of the *Autographa californica* nuclear polyhedrosis virus (AcNPV), which were cloned into a derivative of the pUC8 vector. To create a vector small in size, several non-essential parts of the polyhedrin locus have been deleted, including out-of-frame portions of the polyhedrin gene and portions of open reading frame (ORF) 603. The multiple cloning site (MCS) has been moved directly adjacent to the end of the polyhedrin promoter for higher expression levels. The MCS region of pAcSG2 reads (from 5' to 3'): Xho I, EcoR I, Stu I, Nco I/Sty I, Sac I, Not I, Eag I, Pst I, Kpn I, Sma I/Xma I and Bgl II. The pAcSG2 has an ATG start codon inside the Nco I site, thus sequences cloned downstream of the Nco I site do not require their own start codon but must be in-frame with the ATG of the Nco I site. Sequences cloned upstream of the Nco I site must provide their own ATG and will be expressed as a non-fusion protein. This vector may be used to produce high expression levels of the desired protein under the strong AcNPV polyhedrin promoter control. Because of its small size, pAcSG2 may be used to accommodate inserts as large as 8 Kb. Since the ORF 1629 is present in pAcSG2 this vector can be used in conjunction with the BD BaculoGold™ Transfection Kit (Cat. No. 554740) to achieve virtually 100% recombination efficiencies.

Preparation and Storage

Store undiluted at -20°C.

The plasmid DNA was prepared using a silicon bead matrix and dissolved in TE buffer (10 mM Tris-HCl, pH 7.5; 1 mM EDTA).

Application Notes**Application**

Baculovirus	Routinely Tested
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Recommended Assay Procedure:

For expression under the polyhedrin promoter, insert your gene of interest into the MCS region (see below). Insert must include an ATG translation initiation sequence. For further cloning information refer to the attached restriction map of the plasmid. Transform and amplify the plasmid DNA in *E. coli* strains (DH5α, HB101 or any other suitable strain) under ampicillin selection, then purify using standard protocols. Perform a co-transfection of the purified, recombinant plasmid and BD BaculoGold™ Linearized baculovirus DNA, Cat. No. 554739 using a susceptible insect cell line (e.g., Sf9 or Sf21) and identify recombinant viruses expressing your protein. For detailed procedures, refer to our online protocols or the *Baculovirus Expression Vector System Manual, 6th edition* on our web site at <http://www.bdbiosciences.com/pdfs/manuals/98-6088-1F.pdf>. Sequence information for vectors can be found on the BD Bioscience web site at http://www.bdbiosciences.com/support/vector_sequences/.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554739	Linearized Baculovirus DNA	5 transfections	(none)
554763	Sf9 Insect Cells (Live) in TNM-FH	>10 ⁷ cells	(none)
554762	Sf9 Insect Cells (Frozen)	>10 ⁷ cells	(none)
560129	Transfection Kit	5 transfections	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

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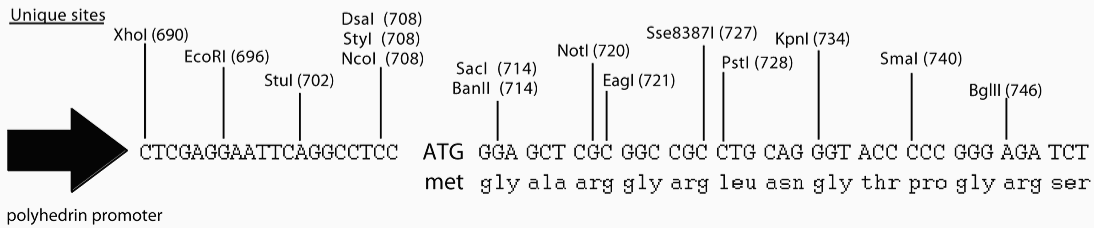
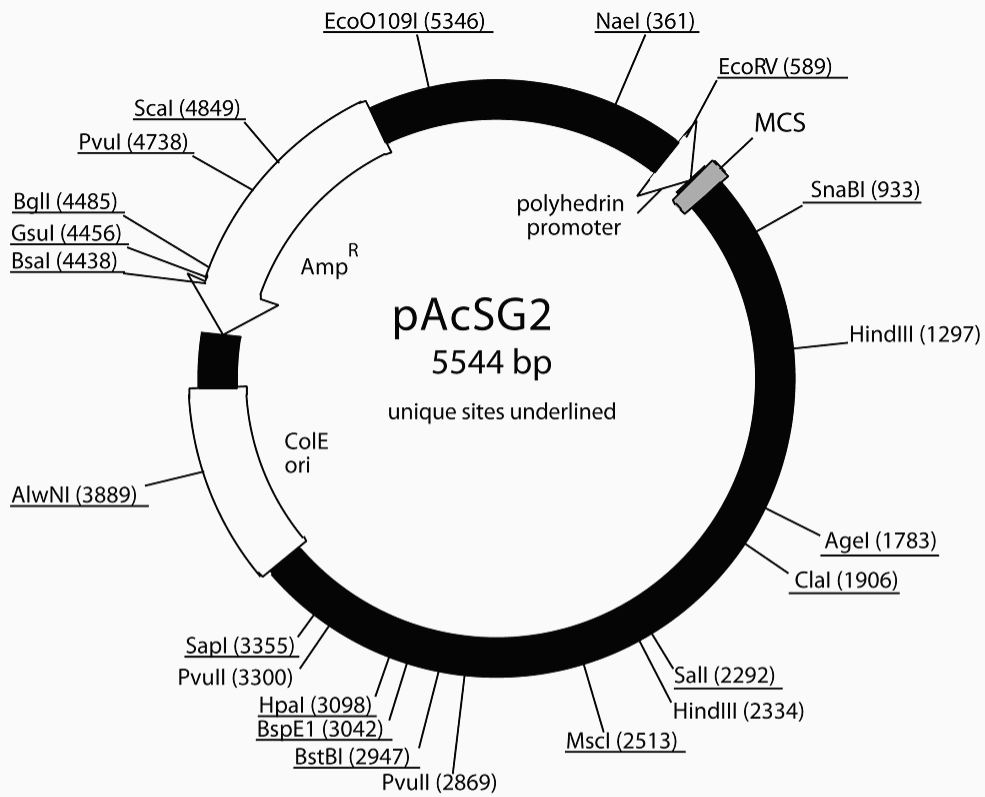
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References

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