pAcP(+)IE1-3 Transfer Plasmid

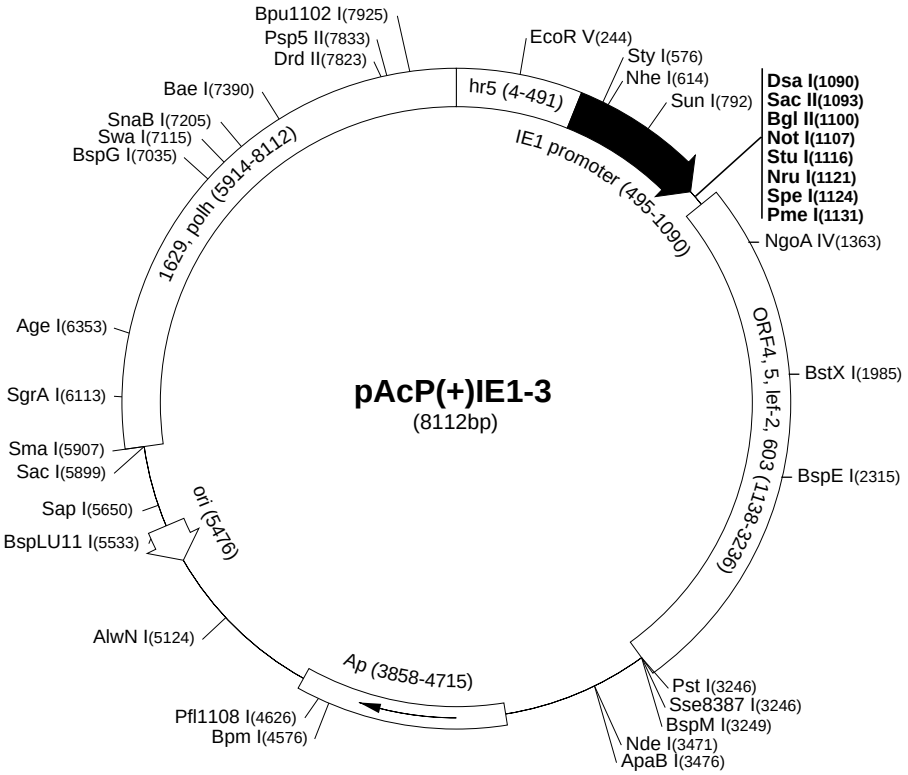
Promoter	AcNPV IE1
Cloning options	polylinker

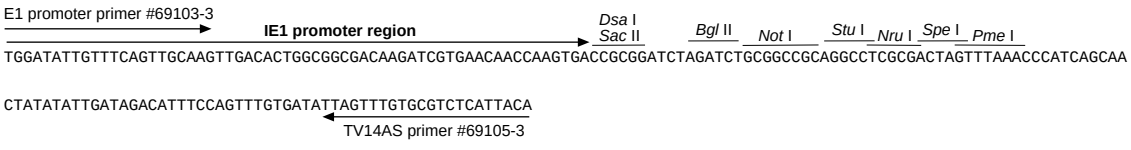
The pAcP(+)IE1-3 transfer plasmid (Cat. No. 69094-3) is designed for the production of recombinant baculoviruses containing foreign genes under the control of the baculovirus ie1 promoter (1). The P(+) designation indicates that this transfer plasmid carries the intact *polyhedrin* gene and will therefore produce occlusion-positive baculoviruses when used with appropriate *occ*– baculovirus DNA, e.g., BacVector™-1000 Triple Cut Virus DNA (Cat. No. 70059-3). Inserts must carry their own ATG translation start codon. The hr5 element, ie1 promoter, and mcs sequences are targeted for insertion into the polyhedrin locus of the viral genome. Unique restriction sites are indicated on the circle map. The cloning/expression region of the coding strand transcribed from the ie1 promoter is shown below. Note that cleavage at the XbaI site at 1097 is blocked by dam methylation unless plasmid is prepared from a dam⁻ host strain.

1. Jarvis, D.L., Weinkauf, C. and Guarino, L.A. (1996) *Prot. Exp. Pur.* **8**, 191–203.

pAcP(+)IE1-3 sequence landmarks

hr5 enhancer	4–491
ie1 promoter + 5'UTR	495–1090
Multiple cloning sites	
(*Sac* II – *Pme* I)	1090–1135





pAcP(+)IE1-3 cloning/expression region

pAcP(+)IE1-3 Restriction Sites

TB171 09/00

Enzyme	# Sites	Locations
AatII	2	3726 6928
AccI	2	1902 2187
AceIII	5	700 3599 4341 5581 6535
AciI	80	
AflIII	12	
AgeI	1	6353
AluI	34	
AlwI	16	
Alw21I	7	2672 2683 3480 3977 4062
		5223 5899
Alw44I	5	2668 2679 3476 3973 5219
AlwNI	1	5124
ApaBI	1	3476
ApoI	20	
AvaI	2	2867 5905
AvaII	8	596 631 2500 4281 4503
		7293 7721 7833
BaeI	1	7390
BamHI	2	5909 7845
BanI	11	
BanII	2	169 5899
BbsI	3	1646 6742 7699
BbvI	25	
BccI	17	
Bce83I	5	4041 4909 5150 5448 5939
BcefI	10	71 739 2275 2949 3253
		5034 6385 6426 6540 7957
BcgI	8	3030 3064 3223 3257 4107
		4141 6392 6426
BclI	2	786 2901
BfaI	14	
BglI	3	1003 3409 4527
BglII	1	1100
BmgI	2	6119 6619
BpmI	1	4576
Bpu10I	2	1729 7850
Bpu1102I	1	7925
BsaI	2	1859 4579
BsaAI	5	198 381 792 7205 7978
BsaBI	4	1099 2724 7560 8087
BsaHI	9	1651 3218 3419 3723 4105
		6105 6372 6725 6925
BsaJI	8	576 1090 3299 5373 5794
		5905 7342 7836
BsaWI	6	1311 2315 4349 5180 5327
		6353
BsaXI	4	795 1993 2366 5679
BsbI	6	1432 2738 3537 6410 6599
		7606
BscGI	13	
BseRI	3	789 1618 7358
BsgI	3	6114 6268 6562
BsiI	5	801 2653 3669 3976 5360
BsiEI	12	
BsiI	15	
BsmI	3	783 2213 2466
BsmAI	9	1195 1859 3608 3650 3803
		4579 5915 6351 6414
BsmBI	4	1195 3608 3650 6351
BsmFI	4	6795 7657 7819 8011
BsoFI	48	
Bsp24I	8	3713 3745 4839 4871 5017
		5049 6762 6794
Bsp1286I	10	169 2672 2683 3480 3977
		4062 5223 5899 6121 6621
BspEI	1	2315
BspGI	1	7035
BspLU11I	1	5533
BspMI	1	3249
BsrI	16	
BsrBI	8	871 2443 3189 3803 5604
		5845 5957 6252

Enzyme	# Sites	Locations
BsrDI	4	2071 2988 4411 4585
BsrFI	5	1363 4560 6113 6161 6353
BsrGI	6	1376 2095 2302 2955 3137
		6871
BssHII	2	510 771
BstXI	1	1985
BstYI	10	1094 1100 3998 4015 4783
		4795 4881 4892 5909 7845
Cac8I	35	
CjeI	34	
CjePI	16	
ClaI	3	212 6231 7434
CviJI	96	
CviRI	37	
DdeI	13	
DpnI	34	
DraI	7	1131 1719 2251 4067 4759
		4778 7115
DrdI	2	3562 5431
DrdII	1	7823
DsaI	1	1090
EaeI	6	850 1107 3201 3265 4252
		5694
EagI	2	850 1107
Eam1105I	3	1650 2516 4645
EarI	7	2094 3358 3846 5650 7376
		7800 7895
EciI	8	910 2285 4489 5317 5463
		6466 6472 6478
Eco47III	2	6064 7247
Eco57I	3	3979 4991 7357
EcoO109I	2	3665 7833
EcoRI	6	86 190 297 373 480
		5889
EcoRII	9	3299 5372 5385 5506 5794
		7341 7506 7611 7836
EcoRV	1	244
FauI	13	
FokI	11	
FspI	5	662 1489 3052 3399 4422
GdiII	6	850 1107 3201 3265 4252
		5694
HaeI	4	1116 5059 5511 5522
HaeII	8	3422 5293 5663 6066 6108
		6210 6375 7249
HaeIII	18	
HgaI	16	
HgiEII	2	3471 4951
HhaI	46	
Hin4I	14	
HincII	7	1052 1903 2188 2294 3222
		7654 7690
HindIII	3	3254 6838 7766
HinfI	17	
HpaI	2	2294 7690
HphI	12	
KpnI	2	5905 7389
MaeII	28	
MaeIII	22	
MboII	18	
MluI	3	880 1745 2664
MmeI	5	1008 5140 5324 6292 7782
MnlI	42	
MseI	59	
MslI	7	1198 2226 2733 3874 4233
		4392 6126
MspI	23	
MspA1I	13	
MunI	4	5941 6306 6867 7212
MwoI	33	
NarI	3	3419 6105 6372

Enzyme	# Sites	Locations
NciI	8	3573 3608 4109 4460 5156
		5906 5907 7831
NdeI	1	3471
NgoAIV	1	1363
NheI	1	614
NlaIII	32	
NlaIV	25	
NotI	1	1107
NruI	1	1121
NsiI	2	1968 2468
NspI	10	622 699 2186 2303 3006
		3030 3252 3620 5537 7652
NspV	2	3078 7446
Pfl1108I	1	4626
PleI	12	
PmeI	1	1131
Psp5II	1	7833
Psp1406I	4	2961 3014 4043 4416
PstI	1	3246
PvuI	6	108 212 3237 3380 4276
		7434
PvuII	3	784 3349 5713
RcaI	4	3700 3805 4813 7569
RleAI	2	1994 6137
RsaI	27	
SacI	1	5899
SacII	1	1093
SalI	2	1901 2186
SapI	1	5650
Sau96I	13	
Sau3AI	34	
ScaI	2	4164 7962
ScrFI	17	
SfaNI	14	
SfcI	5	3242 4399 5077 5268 7734
SgrAI	1	6113
SmaI	1	5907
SnaBI	1	7205
SpeI	1	1124
SphI	3	622 3006 3252
Sse8387I	1	3246
SspI	8	981 1723 2141 3091 3840
		6041 6914 7111
StuI	1	1116
StyI	1	576
SunI	1	792
SwaI	1	7115
TaqI	31	
TaqII	7	1991 3943 3960 4113 4298
		5637 7554
TfiI	5	1699 2506 5559 5699 7239
ThaI	34	
TseI	25	
Tsp45I	7	1085 2546 2601 3285 3596
		4172 4383
Tsp509I	59	
Tth111II	6	1237 3070 4910 4942 4949
		7053
UbaJI	23	
VspI	7	839 2166 2274 4470 5705
		5764 6718
XbaI	1	1097
XmnI	3	4045 6664 7914

Enzymes that do not cut pAcP(+)IE1-3:

AflII	ApaI	AscI	AvrII	Bst1107I
BstEII	Bsu36I	DraIII	EcoNI	FseI
MscI	NcoI	PacI	PflMI	PmlI
PshAI	RsrII	SexAI	SfiI	SgfI
SrfI	Tth111I	XcmI	XhoI	