pTriEx-4 Vector

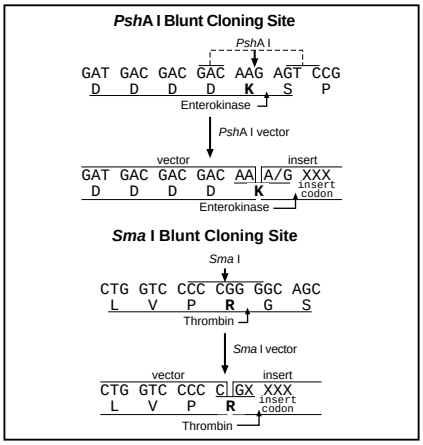
TB282 09/00

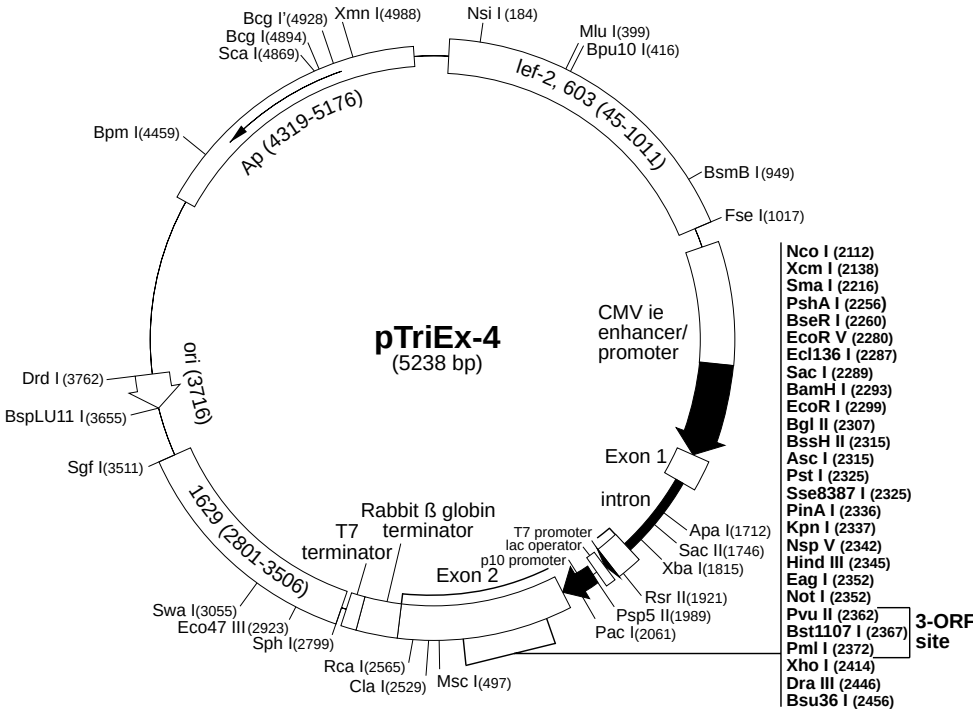
Baculovirus Locus	polh
Promoters	CMV immediate early p10 T7*lac*
N-terminal fusion options	His•Tag S•Tag
C-terminal fusion options	HSV•Tag His•Tag
Cloning options	polylinker Ek/LIC

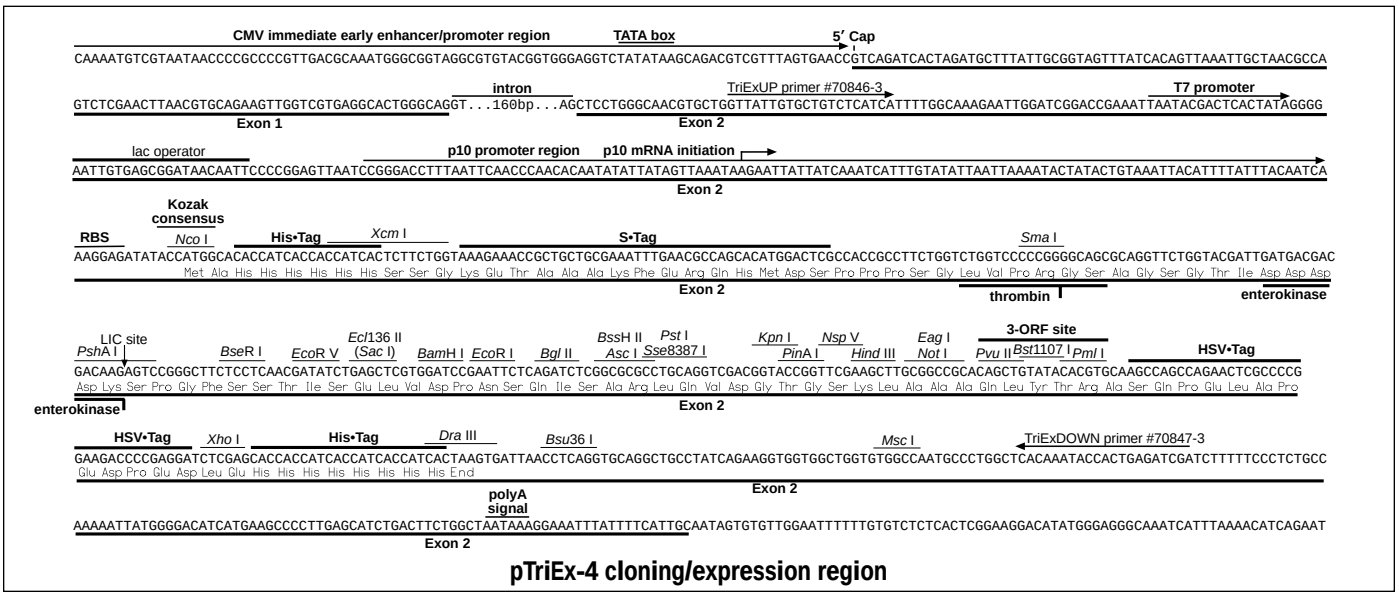
pTriEx-4 sequence landmarks

CMV ie enhancer/promoter	1021–1597
Vertebrate transcription start	1598
T7 promoter	1931–1947
T7 transcription start	1948
lac operator	1952–1972
p10 promoter region	1986–2099
p10 transcription start	2030–2031
Multiple cloning sites (*Sma* I–*Dra* III)	2112–2446
His•Tag® coding sequence	2120–2137
S•Tag™ coding sequence	2147–2191
HSV•Tag® coding sequence	2378–2413
His•Tag® coding sequence	2420–2443
Rabbit globin terminator region	2531–2737
T7 terminator	2741–2788
pUC origin	3716
bla coding sequence	4319–5176

The pTriEx™-4 vector (cat. no. 70824-3) is uniquely designed to allow rapid characterization of target genes in multiple expression systems. With this vector a single recombinant plasmid can be used to test expression in *E. coli*, insect and vertebrate cells. Transient vertebrate expression is mediated by the CMV immediate early enhancer and promoter[2]. For expression in insect cells, pTriEx-4 contains flanking baculovirus sequences to permit the generation of recombinant baculoviruses using the BacVector™ System. In baculovirus-infected insect cells, expression is driven by the very late p10 promoter. Expression in *E. coli* is regulated by the tightly controlled T7*lac* promoter. Expression can be induced in hosts such as NovaBlue by infecting with λCE6, a phage that constitutively expresses T7 RNA polymerase from the λp_L and λp_I promoters. Alternatively, pTriEx recombinant plasmids can be transferred into a (DE3)pLacI host that allows IPTG based induction. Native protein can be expressed by cloning into the *Nco*I site, or native protein can be generated by cloning into the *Psh*AI or *Sma*I sites and cleavage of the fusion protein with enterokinase or thrombin, respectively. The pTriEx-4 vector is also available as an Ek/LIC Cloning Kit (cat. no. 70843-3).







pTriEx-4 cloning/expression region

pTriEx-4 Restriction Sites

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Enzyme	# Sites	Locations
AatII	6	1140 1193 1276 1462 1583 3246
AccI	3	244 2328 2366
AciI	45	
AflIII	5	399 2369 3316 3466 3655
AhdI	2	499 4389
AluI	18	
AlwI	11	
Alw26I	8	285 949 1449 1659 1897 2651 4450 5226
AlwNI	3	1865 2231 4070
ApaI	1	1712
ApaLI	2	3968 5056
ApoI	12	
AscI	1	2315
AvaI	4	1732 2214 2405 2414
AvaII	6	1921 1989 2209 2874 4527 4749
BamHI	1	2293
BanI	3	1480 2333 4337
BanII	2	1712 2289
BbsI	3	498 2406 3424
BbvI	17	
BcgI	1	4894
BcgI'	1	4928
BfaI	9	491 804 1606 1816 2741 2925 3195 4149 4579
BglI	4	1105 1227 1298 4509
BglII	1	2307
BpmI	1	4459
Bpu10I	1	416
BsaI	2	285 4450
BsaAI	3	1355 2372 2965
BsaHI	9	495 1137 1190 1273 1459 1580 3243 3443 4926
BsaJI	13	
BsaWI	5	833 2336 3860 4007 4680
BseRI	1	2260
BsgI	2	1689 2482
BsiEI	6	2355 3511 3571 3994 4759 4908
BsiHKAI	5	2289 2421 3972 4975 5060
BsII	12	
BsmBI	1	949
BsmFI	9	1190 1341 1509 1764 1783 2002 2195 2573 3371
Bsp1286I	6	1712 2289 2421 3972 4975 5060
BspLU11I	1	3655
BspMI	3	1686 2216 2314
BsrI	13	
BsrBI	3	1728 1960 3588
BsrDI	4	79 2616 4450 4624
BsrFI	6	42 781 1013 1806 2336 4469
BsrGI	3	49 768 3295
BssHII	1	2315
BssSI	3	2288 3827 5053
Bst1107I	1	2367
BstXI	2	167 2505
BstYI	7	2293 2307 2410 4295 4306 5014 5031
Bsu36I	1	2456
Cac8I	19	
ClaI	1	2529
CviJI	67	
DdeI	9	416 2283 2304 2443 2456 2523 3929 4346 4886
DpnI	20	
DraI	4	429 2685 3055 4966
DraIII	1	2446
DrdI	1	3762

Enzyme	# Sites	Locations
DsaI	2	1743 2112
EaeI	4	1011 2352 2495 4777
EagI	1	2352
EarI	4	51 547 2143 5184
Ecl136II	1	2287
Eco47III	1	2923
Eco57I	2	4202 5056
EcoO109I	3	1709 1989 2757
EcoRI	1	2299
EcoRII	8	1103 1296 1864 2504 2824 3681 3801 3814
EcoRV	1	2280
FauI	7	1108 1134 1301 1529 1712 1738 1775
Fnu4HI	27	
FokI	3	4355 4536 4823
FseI	1	1017
FspI	2	659 4611
HaeII	2	2925 3902
HaeIII	16	
HgaI	9	146 503 966 1541 2865 3025 3451 3765 4915
HhaI	17	
HincII	3	245 1531 2329
HindIII	1	2345
HinfI	11	
HphI	9	183 879 2117 2420 2426 4459 4875 5081 5116
KpnI	1	2337
MaeIII	13	
MboII	16	
MluI	1	399
MnlI	24	
MscI	1	2497
MseI	37	
MslI	7	950 1380 1837 2694 4641 4800 5159
MspI	21	
MspA1I	7	655 1745 2156 2362 3996 4241 5024
MunI	2	2954 3299
MwoI	18	
NciI	9	1975 1987 2215 2216 2262 2396 4034 4572 4923
NcoI	1	2112
NdeI	4	1249 2665 2725 2733
NgoAIV	2	781 1013
NlaIII	15	
NlaIV	13	
NotI	1	2352
NsiI	1	184
NspI	2	2799 3659
NspV	1	2342
PacI	1	2061
PflMI	1	2182
PinAI	1	2336
PleI	8	150 1419 1931 2180 2265 3298 4033 4378
PmlI	1	2372
PshAI	1	2256
Psp1406I	2	4615 4988
Psp5II	1	1989
PstI	1	2325
PvuI	2	3511 4759
PvuII	1	2362
RcaI	1	2565
RsaI	16	
RsrII	1	1921
SacI	1	2289
SacII	1	1746
SalI	2	243 2327
Sau3AI	20	

Enzyme	# Sites	Locations
Sau96I	13	
ScaI	1	4869
ScrFI	17	
SfaNI	9	14 191 1372 1599 2590 3751 4645 4836 5085
SfcI	6	1857 1943 2321 3919 4110 4630
SgfI	1	3511
SmaI	1	2216
SnaBI	2	1355 2965
SphI	1	2799
Sse8387I	1	2325
SspI	4	425 3059 3256 5193
StyI	2	2112 2752
SwaI	1	3055
TaiI	18	
TaqI	12	
TfiI	3	446 2928 3630
ThaI	12	
TseI	17	
Tsp45I	3	1802 4645 4856
Tsp509I	39	
TspRI	11	
VspI	5	1022 1930 2057 3450 4561
XbaI	1	1815
XcmI	1	2138
XhoI	1	2414
XmnI	1	4988

Enzymes that do not cut pTriEx-4:

AflII	AvrII	BclI	Bpu1102I	BsaBI
BsmI	BspEI	BstEII	EcoNI	EheI
HpaI	NarI	NheI	NruI	PmeI
SanDI	SapI	SexAI	SfiI	SgrAI
SpeI	SrfI	StuI	SunI	Tth111I
UbaEI				