

pTriEx-4 Vector

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

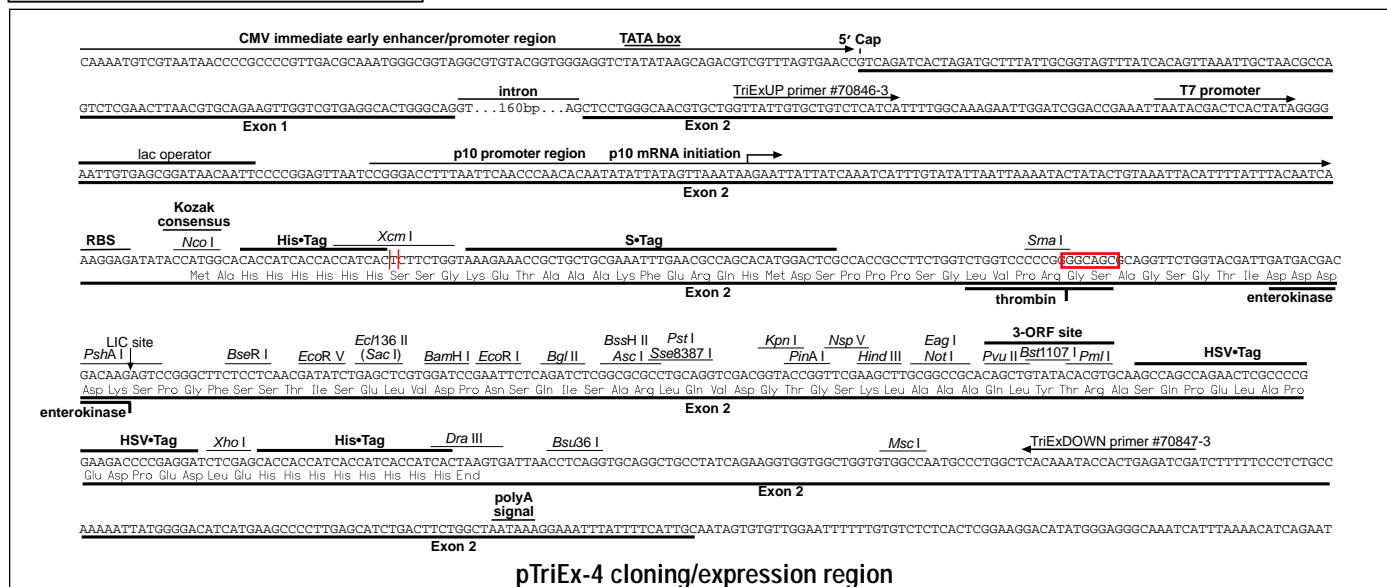
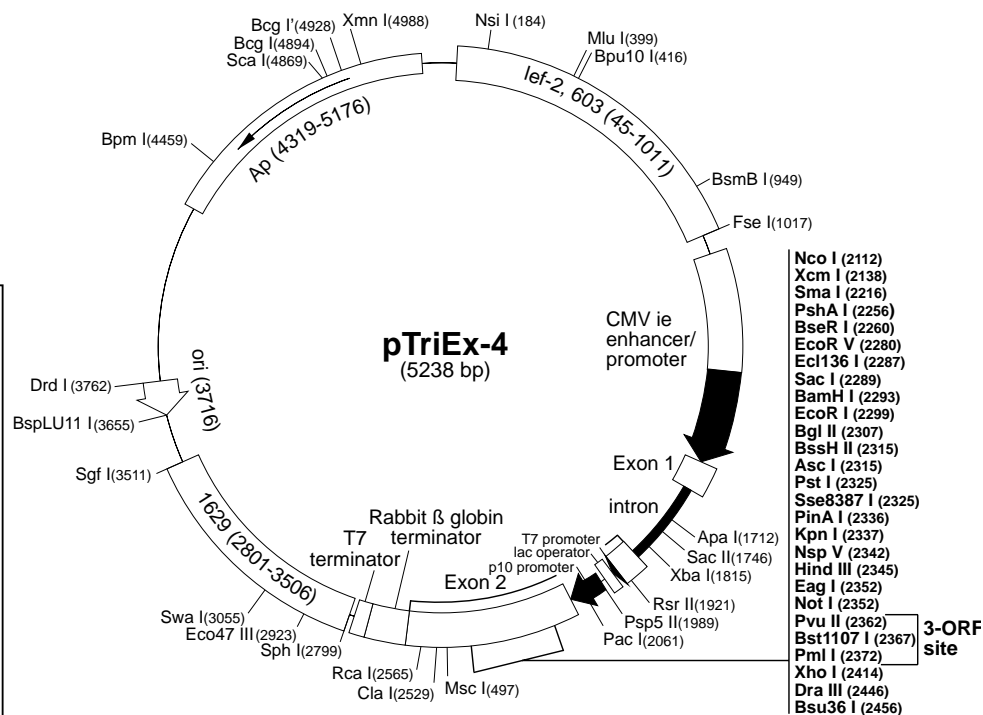
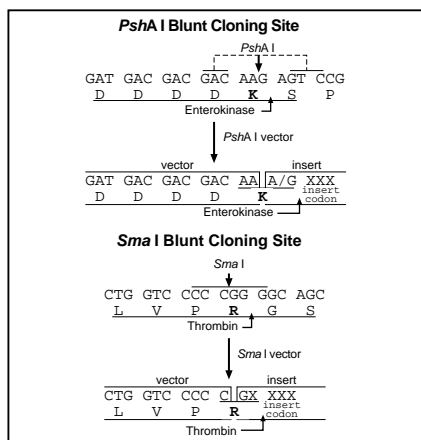
pTriEx-4 sequence landmarks

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 vector¹ (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 promoter². 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 λ_{pL} and λ_{pI} 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).

¹ patent pending

² The CMV promoter is covered by U.S. Patent nos. 5,168,062 and 5,385,839 issued to the University of Iowa Research Foundation and is licensed for research use only.



pTriEx-4 Restriction Sites

Enzyme	# Sites	Locations	Enzyme	# Sites	Locations	Enzyme	# Sites	Locations		
AatII	6	1140 1193 1276 1462 1583 3246	DsaI	2	1743 2112	Sau96I	13			
AccI	3	244 2328 2366	EaeI	4	1011 2352 2495 4777	Scal	1	4869		
AcI	45		EagI	1	2352	ScrFI	17			
AflIII	5	399 2369 3316 3466 3655	EarI	4	51 547 2143 5184	SfaNI	9	14 191 1372 1599 2590 3751 4645 4836 5085		
AhdI	2	499 4389	Ecl136II	1	2287	Sfcl	6	1857 1943 2321 3919 4110 4630		
AluI	18		Eco47III	1	2923	Sgfl	1	3511		
AlwI	11		Eco57I	2	4202 5056	Smal	1	2216		
Alw26I	8	285 949 1449 1659 1897 2651 4450 5226	EcoO109I	3	1709 1989 2757	SnaBI	2	1355 2965		
AlwNI	3	1865 2231 4070	EcoRI	1	2299	SphI	1	2799		
ApaI	1	1712	EcoRII	8	1103 1296 1864 2504 2824 3681 3801 3814	Sse8387I	1	2325		
ApaLI	2	3968 5056	EcoRV	1	2280	Sspl	4	425 3059 3256 5193		
ApoI	12		FauI	7	1108 1134 1301 1529 1712 1738 1775	Styl	2	2112 2752		
AscI	1	2315	Fnu4HI	27		Swal	1	3055		
AvaI	4	1732 2214 2405 2414	FokI	3	4355 4536 4823	Tail	18			
Avall	6	1921 1989 2209 2874 4527 4749	FseI	1	1017	TaqI	12			
BamHI	1	2293	FspI	2	659 4611	TfiI	3	446 2928 3630		
BanI	3	1480 2333 4337	HaeII	2	2925 3902	Thal	12			
BanII	2	1712 2289	HaeIII	16		TseI	17			
BbsI	3	498 2406 3424	Hgal	9	146 503 966 1541 2865 3025 3451 3765 4915	Tsp45I	3	1802 4645 4856		
BbvI	17		Hhal	17		Tsp509I	39			
Bcgl	1	4894	HincII	3	245 1531 2329	TspRI	11			
Bcgl'	1	4928	HindIII	1	2345	VspsI	5	1022 1930 2057 3450 4561		
Bfal	9	491 804 1606 1816 2741 2925 3195 4149 4579	Hinfl	11		XbaI	1	1815		
BglI	4	1105 1227 1298 4509	HphI	9	183 879 2117 2420 2426 4459 4875 5081 5116	XcmI	1	2138		
BglII	1	2307	KpnI	1	2337	XhoI	1	2414		
BpmI	1	4459	MaeIII	13		XmnI	1	4988		
Bpu10I	1	416	MbolI	16		Enzymes that do not cut pTriEx-4:				
BsaI	2	285 4450	MluI	1	399	AflII	AvrII	BclI	Bpu1102I	BsaBI
BsaAI	3	1355 2372 2965	MnII	24		BsmI	BspEI	BstEII	EcoNI	EheI
BsaHI	9	495 1137 1190 1273 1459 1580 3243 3443 4926	MscI	1	2497	HpaI	NarI	NheI	NruI	PmeI
BsaJI	13		MseI	37		SanDI	SapI	SexAI	SfiI	SgrAI
BsaWI	5	833 2336 3860 4007 4680	MslI	7	950 1380 1837 2694 4641 4800 5159	SpeI	SrfI	StuI	SunI	Tth111I
BseRI	1	2260	MspI	21		UbaEI				
BsgI	2	1689 2482	MspA1I	7	655 1745 2156 2362 3996 4241 5024					
BsIEI	6	2355 3511 3571 3994 4759 4908	MunI	2	2954 3299					
BsiHKAI	5	2289 2421 3972 4975 5060	Mwol	18						
BsII	12		NciI	9	1975 1987 2215 2216 2262 2396 4034 4572 4923					
BsmBI	1	949	NcoI	1	2112					
BsmFI	9	1190 1341 1509 1764 1783 2002 2195 2573 3371	NdeI	4	1249 2665 2725 2733					
Bsp1286I	6	1712 2289 2421 3972 4975 5060	NgoAIV	2	781 1013					
BspLU11I	1	3655	NlaIII	15						
BspMI	3	1686 2216 2314	NlaIV	13						
Bsrl	13		NotI	1	2352					
BsrBI	3	1728 1960 3588	Nsil	1	184					
BsrDI	4	79 2616 4450 4624	NspI	2	2799 3659					
BsrFI	6	42 781 1013 1806 2336 4469	NspV	1	2342					
BsrGI	3	49 768 3295	Pacl	1	2061					
BssHII	1	2315	PfiMI	1	2182					
BssSI	3	2288 3827 5053	PinAI	1	2336					
Bst1107I	1	2367	PleI	8	150 1419 1931 2180 2265 3298 4033 4378					
BstXI	2	167 2505	PmlI	1	2372					
BstYI	7	2293 2307 2410 4295 4306 5014 5031	PshAI	1	2256					
Bsu36I	1	2456	Psp1406I	2	4615 4988					
Cac8I	19		Psp5II	1	1989					
Clal	1	2529	PstI	1	2325					
CviJI	67		PvuI	2	3511 4759					
Ddel	9	416 2283 2304 2443 2456 2523 3929 4346 4886	PvuII	1	2362					
Dpnl	20		Rcal	1	2565					
Dral	4	429 2685 3055 4966	Rsal	16						
DrallI	1	2446	RsrII	1	1921					
DrdI	1	3762	SacI	1	2289					
			SacII	1	1746					
			Sall	2	243 2327					
			Sau3AI	20						

pTriEx-4 Vector Sequence

To convert the sequence into other formats, first select the sequence in this window and copy (Command-C on Mac or Ctrl-C on Windows). Next, [click here](#) to open the NIH ReadSeq web page in a new window. Paste the sequence into the input field (Command-V on Mac or Ctrl-V on PC), choose your favorite format from the dropdown menu, and hit the "submit" button.

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251 GCTCTGTCCG TTTGCTGGCA ACTGCAAGGG TCTCAATCCT ATTTGTAATT
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