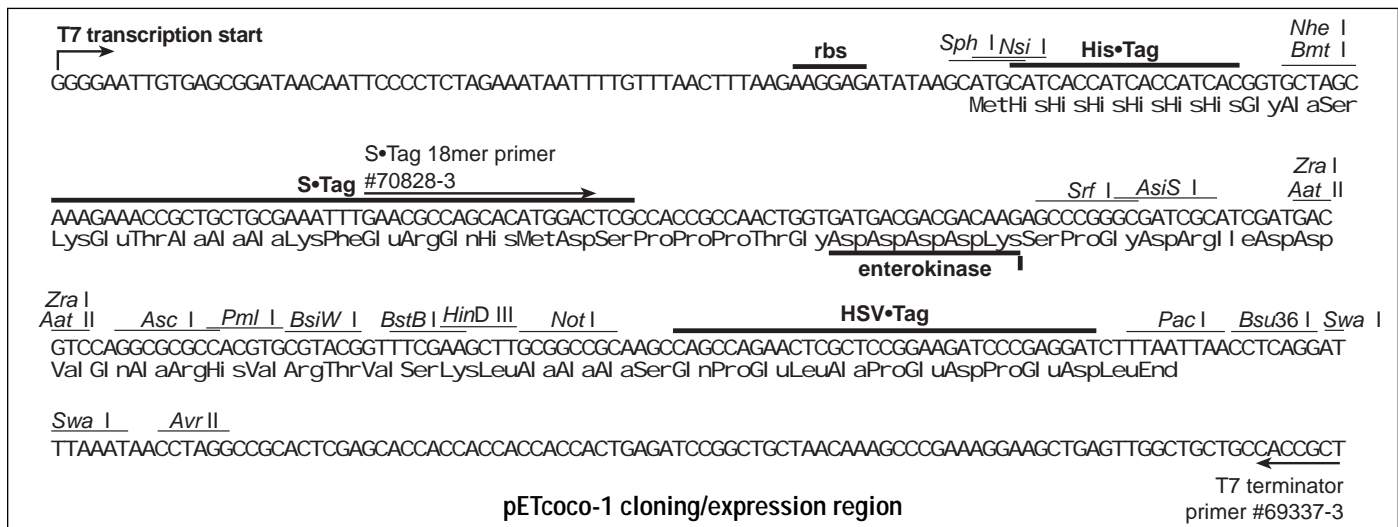
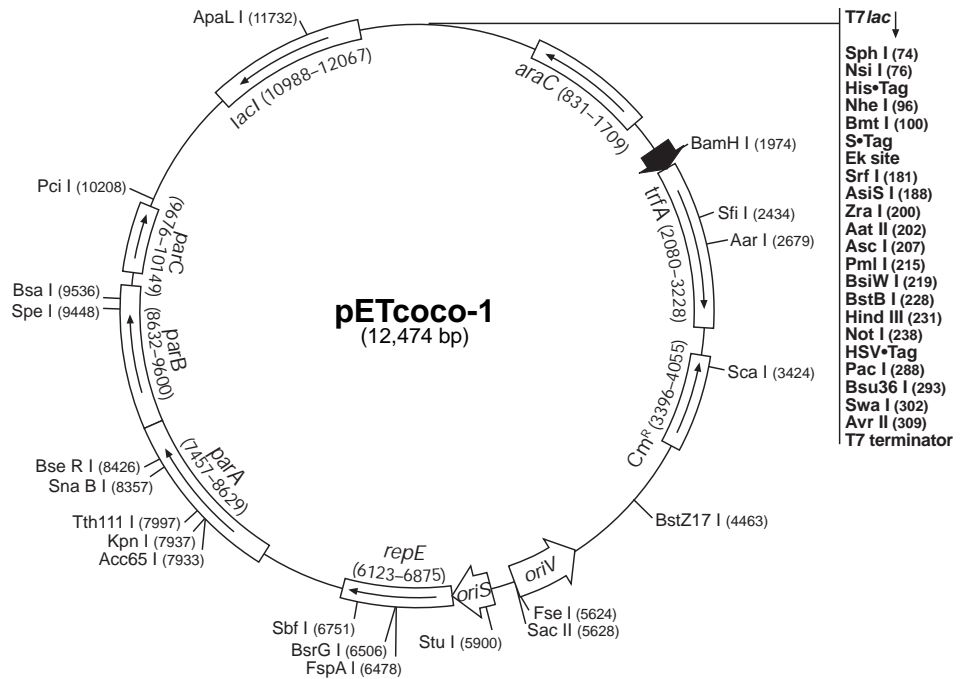


# pETcoco-1 Vector

	Cat. No.
pETcoco-1 DNA	71129-3
<b>pETcoco-1 sequence landmarks</b>	
T7 promoter	12458-12474
<i>lac</i> operator	5-25
T7 transcription start	1
Multiple cloning sites ( <i>Sph</i> I- <i>Avr</i> II)	74-309
His•Tag® coding sequence	75-92
S•Tag™ coding sequence	102-146
HSV•Tag® coding sequence	246-281
T7 terminator	410-457
<i>araC</i> coding sequence	831-1709
<i>trfA</i> coding sequence	2080-3228
Cm <sup>R</sup> coding sequence	3396-4055
<i>oriV</i>	5097-5622
<i>oriS</i>	7457-8629
<i>repE</i> coding sequence	6123-6875
<i>parA</i> coding sequence	7457-8629
<i>parB</i> coding sequence	8632-9600
<i>parC</i> coding sequence	9676-10149
<i>lacI</i> coding sequence	10988-12067

The pETcoco™ expression vectors are designed to allow “on command” amplification of vector copy number from single copy (1-2 plasmid copies per cell) to medium copy (20- 50 per cell). The vector is maintained in the single copy state by utilizing the *oriS* and *repE* elements of the F episome together with the *parABC* partition determinants. The medium copy state is obtained by employing the RK-2 derived *trfA* replicator acting at *oriV*. The switch from single copy to medium copy status is achieved by inducing the expression of the *trfA* gene with arabinose. The dual replicon nature of these vectors promotes enhanced stability of recombinant plasmids and extremely low basal expression levels in the single copy state, while allowing robust target protein expression typical of the pET vectors. Unique restriction sites are shown on the circle map (below). The sequence is numbered relative to the start of T7 transcription at +1.



# pETcoco-1 Restriction Sites

Enzyme	# Sites	Locations	Enzyme	# Sites	Locations	Enzyme	# Sites	Locations
AarI	1	2679	BsmBI	5	2317 3613 4166 6668 11097	NheI	1	96
AatII	1	202	BsmFI	26		NotI	1	238
Acc65I	1	7933	BsmI	4	1832 2812 3443 3850	NruI	4	923 1443 4263 10400
AccI	5	3277 4462 4521 9620 10389	BspI286I	20		NsiI	1	76
AccI	3	3752 8325 12052	BspCNI	25		NspI	5	74 1103 4450 10212 12245
AfeI	2	7292 12311	BspEI	5	263 476 1450 3841 8493	NspV	1	228
AfIII	3	1036 9334 9574	BspHI	5	4813 7507 8161 9357 12314	Pacl	1	288
AfIII	5	1870 7699 7873 10208 11712	BspLU11I	1	10208	PciI	1	10208
AgeI	4	1809 6553 7783 8676	BspMI	6	2320 2679 3129 5192 6740	PfiMI	8	137 1655 2763 3612 4179
AhdI	2	2844 10212			10507			4952 8025 12137
AleI	2	3118 9269	BsrBI	6	13 580 2546 3072 4279	PfoI	3	2900 9477 12144
Alol	2	4790 8427			4901	PinAI	4	1809 6553 7783 8676
AlwNI	8	2763 2937 4350 5067 7835	BsrDI	11		PmlI	1	215
		7855 8877 10739	BsrFI	19		PpuMI	5	2403 2760 2934 4347 10584
Apal	2	9698 11509	BsrGI	1	6506	PshAI	9	4498 9743 9786 9829 9872
ApalI	1	11732	BssHII	5	207 1405 8190 8734 11301			9915 9958 10044 10130
AscI	1	207	BssSI	3	7883 9533 10096	Psil	2	5183 5848
Asel	7	4768 7725 8217 10488 10970	Bst1107I	1	4463	PspOMI	2	9694 11505
		11029 12457	BstAPI	4	738 4564 10371 12036	PstI	3	2690 6751 8292
AsiSI	1	188	BstBI	1	228	PvuI	2	188 8599
Aval	7	179 273 320 889 5011	BstEII	3	1812 10330 11530	PvuII	5	3941 6701 8707 11023 11116
		6217 8843	BstXI	4	7811 11666 11789 11918	SacI	3	10398 10406 10816
AvrII	1	309	BstYI	15		SacII	1	5628
BaeI	3	1006 8221 10487	BstZ17I	1	4463	Sall	2	3276 10388
BamHI	1	1974	Bsu36I	1	293	SapI	3	1798 7329 8539
BanI	14		Btgl	19		SbfI	1	6751
BanII	9	180 653 9698 10398 10406	BtrI	6	2616 2628 2846 5485 7763	Scal	1	3424
		10816 11509 12322 12336			10523	SexAI	2	3206 10326
BbeI	4	11077 12259 12373 12394	BtsI	4	1773 8285 10985 11353	Sfcl	8	501 2686 2821 6279 6747
BbsI	5	7776 7965 8842 11227 11566	Clal	2	193 12437			8288 10223 12470
BceAI	30		Dral	7	302 914 3582 3921 5196	Sfil	1	2434
Bcgl	6	866 1233 2700 4463 10363			7359 10704	SfoI	4	11075 12257 12371 12392
		11392	DraIII	2	4564 10549	SgrAI	6	2395 2644 5613 7783 8940
BciVI	3	1682 5613 11260	DrdI	5	1769 4340 5980 6875 8171			12393
BclI	2	8524 11698	EaeI	21		Smal	2	181 6219
BfrBI	1	74	EagI	9	238 724 2288 5049 5094	SmlI	13	
BglI	3	2434 5897 10346			5491 5618 5622 5683	SnaBI	1	8357
BglII	2	5872 7939	EarI	8	1798 3152 6375 6415 7329	SpeI	1	9448
BlnI	2	399 7205			8539 8949 12095	SphI	1	74
Bme1580I	7	2864 3374 5122 5398 9698	Ecil	10	1077 1205 2127 3079 4415	SrfI	1	181
		11509 11736			5254 5551 6141 6723 11927	Sse8387I	1	6751
BmgBI	6	2616 2628 2846 5485 7763	Ecl136II	3	10396 10404 10814	SspI	7	1371 3529 5188 6331 9165
		10523	Eco57I	8	1685 4840 6439 6952 7788			9192 9684
Bmrl	6	9744 9873 10914 11554 11791			7883 9413 10473	StuI	1	5900
		12188	Eco57MI	15		StyI	7	309 421 3536 4631 5812
BmtI	1	100	EcoICRI	3	10396 10404 10814			6459 9913
BpII	2	8574 8856	EcoNI	2	6195 12180	Swal	1	302
Bpml	7	3721 7190 7603 8569 9500	EcoO109I	8	426 2403 2760 2934 3228	TaqII	15	
		11391 11880			4347 10584 12280	TatI	3	1154 3422 6506
Bpu10I	3	4065 6653 7848	EcoRI	2	2050 3837	TspGWI	13	
BpuEI	8	463 1224 3058 5314 5360	EcoRV	4	1121 6854 7083 11266	Tth111I	1	7997
		5532 8303 10904	FseI	1	5624	XbaI	2	30 5918
BsaAI	6	215 4148 7874 8357 8462	FspAI	1	6478	XcmI	4	5423 11327 11345 11861
		9199	FspI	2	6478 10304	XhoI	2	320 5011
BsaBI	6	976 2350 10480 10564 12433	HaeII	14		XmaI	2	179 6217
		12443	HincII	9	2619 3278 5521 5556 6251	XmnI	4	6384 6454 9165 10649
BsaHI	8	199 1928 2648 11074 11757			8932 10355 10390 11210	ZraI	1	200
		12256 12370 12391	HindIII	1	231			
Bsal	1	9536	HpaI	2	10355 11210			
BsaWI	15		KasI	4	11073 12255 12369 12390			
BsaXI	7	2028 4769 7576 8294 8979	KpnI	1	7937			
		9473 11044	MfeI	4	809 1233 1743 7713			
BseRI	1	8426	MluI	2	1870 11712			
BseYI	7	1588 3250 5693 8616 9373	MscI	3	3574 5475 8144			
		11178 11313	MslI	16				
BsgI	6	2869 4586 8048 8993 11667	NaeI	8	621 2397 5491 5615 5622			
		11867			6431 10347 12404			
BsiEI	19		NarI	4	11074 12256 12370 12391			
BsiHKAI	10	327 992 4982 7324 8816	NcoI	2	3536 9913			
		10398 10406 10816 11736 12220	NdeI	2	2992 7731			
BsiWI	1	219	NgoMIV	8	619 2395 5489 5613 5620			
BsmAI	12				6429 10345 12402			

Enzymes that do not cut pETcoco-1:  
BbvCI Fall PmeI Ppil PsrI RsrII SanDI