

pET-3a-d Vectors

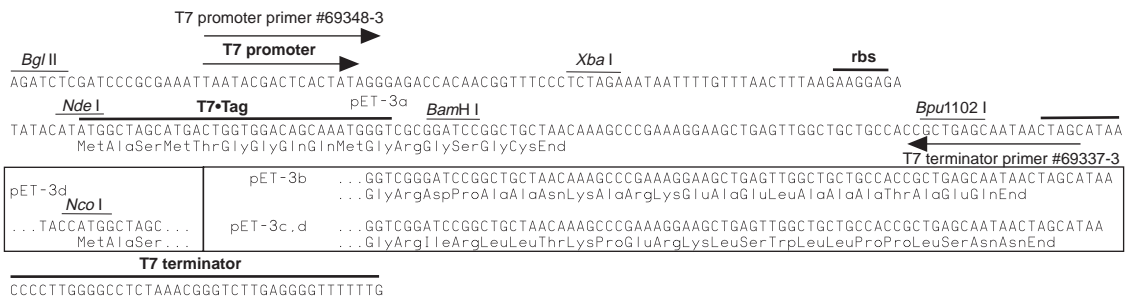
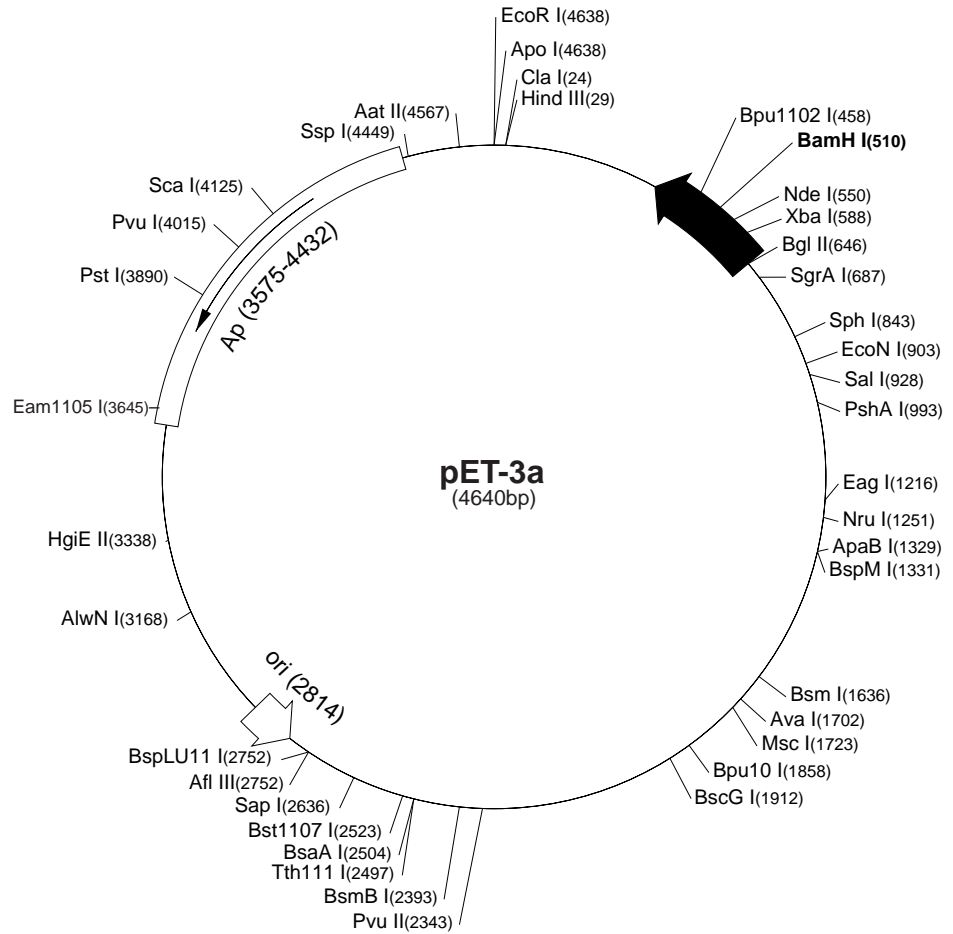
	Cat. No.
pET-3a DNA	69418-3
pET-3b DNA	69419-3
pET-3c DNA	69420-3
pET-3d DNA	69421-3

The pET-3a-d vectors carry an N-terminal T7•Tag[®] sequence and *Bam*H I cloning site. These vectors are the precursors to many pET family vectors; the pET-23a-d(+) series corresponds to pET-3a-d but incorporates several additional features. Unique sites are shown on the circle map. Note that the sequence is numbered by the pBR322 convention, so the T7 expression region is reversed on the circular map. The cloning/expression region of the coding strand transcribed by T7 RNA polymerase is shown below.

pET-3a sequence landmarks

T7 promoter	615-631
T7 transcription start	614
T7•Tag coding sequence	519-551
T7 terminator	404-450
pBR322 origin	2814
<i>bla</i> coding sequence	3575-4432

The maps for pET-3b, pET-3c and pET-3d are the same as pET-3a (shown) with the following exceptions: pET-3b is a 4639bp plasmid; subtract 1bp from each site beyond *Bam*H I at 510. pET-3c is a 4638bp plasmid; subtract 2bp from each site beyond *Bam*H I at 510. pET-3d is a 4637bp plasmid; the *Bam*H I site is in the same reading frame as in pET-3c. An *Nco* I site is substituted for the *Nde* I site with a net 1bp deletion at position 550 of pET-3c. As a result, *Nco* I cuts pET-3d at 546. For the rest of the sites, subtract 3bp from each site beyond position 551 in pET-3a. *Nde* I does not cut pET-3d.



pET-3a-d cloning/expression region

pET-3a Restriction Sites

Enzyme	# Sites	Locations
AatII	1	4567
AccI	2	929 2522
AceIII	5	974 2261 2402 2704 3944
Acil	86	
AflIII	1	2752
AluI	18	
AlwI	14	
Alw21I	8	280 868 1455 1746 2570
		3070 4231 4316
Alw44I	3	2566 3066 4312
AlwNI	1	3168
ApaBI	1	1329
ApoI	1	4638
AvaI	1	1702
Avall	8	1076 1164 1413 1716 1758
		2037 3783 4005
BamHI	1	510
BanI	9	76 119 690 711 825
		1043 1482 1566 3593
BanII	2	752 766
BbsI	3	1007 1870 4623
BbvI	24	
BccI	9	737 830 1267 1356 1663
		1675 3682 3806 4093
Bce83I	7	399 962 1132 2843 3141
		3382 4250
Bcefl	3	887 1444 3254
BcgI	8	506 540 974 1008 2329
		2363 4150 4184
Bfal	8	230 448 544 589 1766
		3247 3500 3835
BglI	3	1212 1446 3765
BglII	1	646
BpmI	4	1109 1663 2279 3715
Bpu10I	1	1858
Bpu1102I	1	458
BsaI	2	613 3706
BsaAI	1	2504
BsaBI	3	645 651 1949
BsaHI	6	691 712 826 1483 4182
		4564
BsaJI	9	115 129 435 805 811
		1444 1646 1724 2912
BsaWI	6	380 970 1941 2958 3105
		3936
Bsbl	2	2468 4188
BscGI	1	1912
Bsil	3	2925 4309 4616
BsiEI	7	289 933 1219 2668 3092
		4015 4164
BsII	21	
BsmI	1	1636
BsmAI	4	613 2393 3706 4482
BsmBI	1	2393
BsmFI	4	829 1150 1375 2023
BsoFI	45	
Bsp24I	10	513 545 658 690 3245
		3277 3423 3455 4549 4581
Bsp1286I	10	280 752 766 868 1455
		1746 2570 3070 4231 4316
BspEI	2	380 1941
BspGI	3	1336 1413 2278
BspLU11I	1	2752
BspMI	1	1331
BsrI	20	
BsrBI	2	2685 4486
BsrDI	2	3706 3880
BsrFI	7	160 678 687 1046 1206
		1560 3725
Bst1107I	1	2523
BstYI	9	510 646 1944 3393 3404
		3490 3502 4270 4287

Enzyme	# Sites	Locations
CacBI	32	
CjeI	18	
CjePI	22	
Clal	1	24
CviJI	79	
CviRI	21	
Ddel	10	458 479 1858 2020 2560
		3027 3436 3602 4142 4568
Dpnl	25	
Dral	2	2445 2860
Dsal	2	805 1724
EaeI	6	295 676 808 1216 1721
		4033
EagI	1	1216
Eam1105I	1	3645
EarI	2	2636 4440
Ecil	4	1672 2826 2972 3800
Eco47III	4	234 773 1054 2006
Eco57I	2	3300 4312
EcoNI	1	903
EcoO109I	5	431 801 1716 1758 4621
EcoRI	1	4638
EcoRII	6	129 1335 1718 2778 2899
		2912
EcoRV	2	187 378
FauI	11	
FokI	12	
FspI	4	262 1635 1733 3867
GdIII	5	295 676 808 1216 4033
HaeI	7	1197 1269 1326 1723 2767
		2778 3230
HaeII	11	
HaeIII	23	
HgaI	11	
HgiEI	1	3338
HhaI	31	
Hin4I	5	16 334 1418 3644 3718
HincII	2	930 4186
HindIII	1	29
Hinfl	11	
HphI	12	
Maell	10	1178 1234 1823 1847 2077
		2503 3455 3871 4244 4564
MaeIII	17	
MbolI	11	
MmeI	4	222 309 2967 3151
MnlI	30	
MscI	1	1723
MseI	18	
MslI	7	1308 1739 1934 2325 3897
		4056 4415
MspI	28	
MspA1I	7	462 1418 2343 2462 3094
		3339 4280
MwoI	37	
NarI	4	691 712 826 1483
NciI	10	171 812 1536 1762 2090
		2396 2431 3132 3828 4179
NdeI	1	550
NgoAIV	4	678 1046 1206 1560
NheI	2	229 543
NlaIII	27	
NlaIV	25	
NruI	1	1251
NspI	4	843 2097 2389 2756
Pfi1108I	2	1035 3663
PfiMI	2	1598 1647
PleI	5	629 917 2646 3131 3634
PshAI	1	993
Psp5II	2	1716 1758
Psp1406I	4	1178 2077 3871 4244
PstI	1	3890

Enzyme	# Sites	Locations
PvuI	1	4015
PvuII	1	2343
RcaI	4	766 3472 4480 4585
RsaI	3	165 2558 4125
Sall	1	928
SapI	1	2636
Sau96I	16	
Sau3AI	25	
Scal	1	4125
ScrFI	16	
SfaNI	22	
Sfcl	5	138 614 3017 3208 3886
SgrAI	1	687
SphI	1	843
Sspl	1	4449
StyI	2	435 1646
TaqI	9	24 339 643 651 929
		1404 1545 2852 4296
TaqII	6	947 2654 3993 4178 4331
		4348
TfiI	6	1129 1283 1581 1802 2306
		2727
Thal	25	
Tsel	24	
Tsp45I	9	124 212 1157 1424 2191
		2404 2499 3901 4112
Tsp509I	10	58 251 580 630 1596
		1610 3512 3818 4073 4638
Tth111I	1	2497
Tth111III	5	2213 3342 3349 3381 4637
UbaJI	21	
VspI	2	629 3817
XbaI	1	588
XmnI	2	2310 4244

Enzymes that do not cut pET-3a:

AflII	AgeI	ApaI	AscI	AvrII
BaeI	BclI	BmgI	BsaXI	BseRI
BsrGI	BssHII	BstEII	BstXI	Bsu36I
DrallI	DrdII	FseI	HpaI	KpnI
MluI	MunI	NcoI	NotI	NsiI
NspV	Pacl	PmeI	PmlI	RleAI
RsrII	SacI	SacII	SexAI	SfiI
Sgfl	Smal	SnaBI	SpeI	SrfI
Sse8387I	Stul	SunI	Swal	XcmI
XhoI				