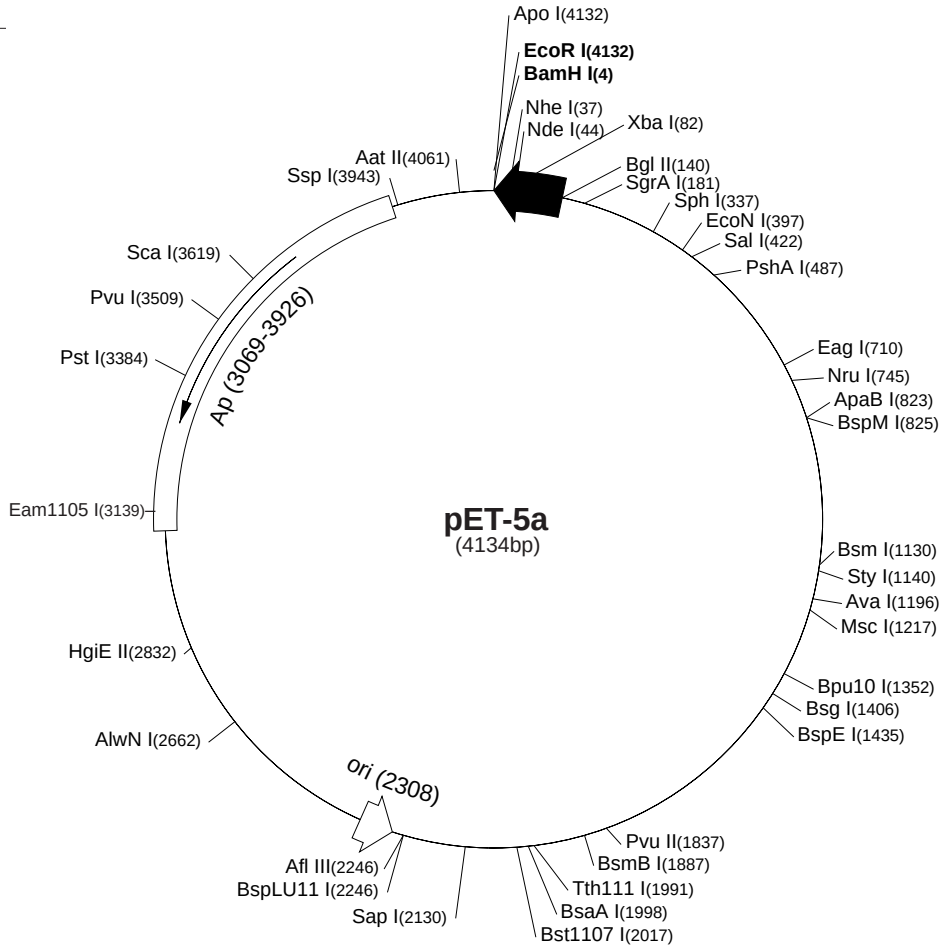
pET-5a-c Vectors

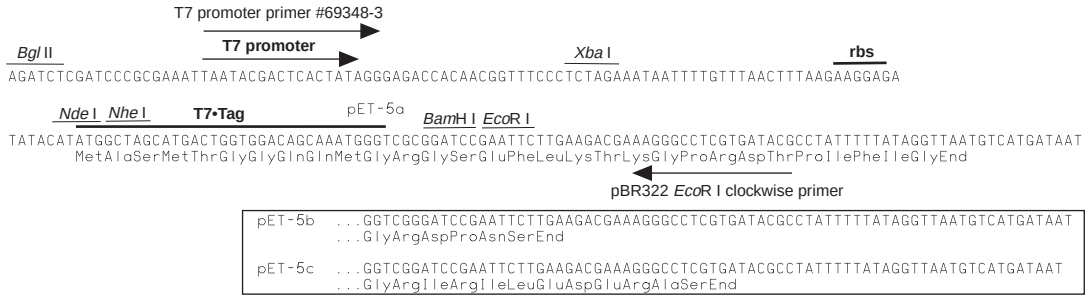
	Cat. No.
pET-5a DNA	69426-3
pET-5b DNA	69427-3
pET-5c DNA	69428-3

The pET-5a-c vectors carry an N-terminal T7•Tag® sequence and *Bam*H I/*Eco*R I cloning sites. The T7 terminator present on many other pET vectors is missing in the pET-5a-c series; therefore, β-lactamase is generally produced in large amounts in pET-5 recombinants induced for T7 RNA polymerase expression. The pET-23a-d(+) series corresponds to pET-5a-c but incorporates several additional features, including the T7 terminator (Cat. No. 69337-3). 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-5a(+) sequence landmarks	
T7 promoter	109-125
T7 transcription start	108
pBR322 origin	2308
bla coding sequence	3069-3926

The maps for pET-5b and pET-5c are the same as pET-5a (shown) with the following exceptions: pET-5b is a 4133bp plasmid; subtract 1bp from each site beyond *Bam*H I at 4. pET-5c is a 4132bp plasmid; subtract 2bp from each site beyond *Bam*H I at 4.





pET-5a-c cloning/expression region

pET-5a Restriction Sites

TB029 12/98

Enzyme	# Sites	Locations
AatII	1	4061
AccI	2	423 2016
AceIII	5	468 1755 1896 2198 3438
AciI	64	
AflIII	1	2246
AluI	15	
AlwI	14	
Alw21I	7	362 949 1240 2064 2564 3725 3810
Alw44I	3	2060 2560 3806
AlwNI	1	2662
ApaBI	1	823
ApoI	1	4132
AvaI	1	1196
AvaII	8	570 658 907 1210 1252 1531 3277 3499
BamHI	1	4
BanI	7	184 205 319 537 976 1060 3087
BanII	2	246 260
BbsI	3	501 1364 4117
BbvI	20	
BccI	9	231 324 761 850 1157 1169 3176 3300 3587
Bce83I	6	456 626 2337 2635 2876 3744
BcefI	3	381 938 2748
BcgI	8	34 468 502 1823 1857 3644 3678 4134
BfaI	6	38 83 1260 2741 2994 3329
BglI	3	706 940 3259
BglII	1	140
BpmI	4	603 1157 1773 3209
Bpu10I	1	1352
BsaI	2	107 3200
BsaAI	1	1998
BsaBI	3	139 145 1443
BsaHI	6	185 206 320 977 3676 4058
BsaJI	6	299 305 938 1140 1218 2406
BsaWI	5	464 1435 2452 2599 3430
BsbI	2	1962 3682
BscGI	10	299 958 1222 1607 1940 2573 2919 3140 3164 3686
BsgI	1	1406
BsiI	3	2419 3803 4110
BsiEI	6	427 713 2162 2586 3509 3658
BsII	17	
BsmI	1	1130
BsmAI	4	107 1887 3200 3976
BsmBI	1	1887
BsmFI	4	323 644 869 1517
BsoFI	39	
Bsp24I	10	7 39 152 184 2739 2771 2917 2949 4043 4075
Bsp1286I	9	246 260 362 949 1240 2064 2564 3725 3810
BspEI	1	1435
BspGI	3	830 907 1772
BspLU11I	1	2246
BspMI	1	825
BsrI	18	
BsrBI	2	2179 3980
BsrDI	2	3200 3374
BsrFI	6	172 181 540 700 1054 3219
Bst1107I	1	2017
BstYI	9	4 140 1438 2887 2898 2984 2996 3764 3781

Enzyme	# Sites	Locations
Cac8I	29	
CjeI	18	
CjePI	16	
CviJI	68	
CviRI	20	
DdeI	8	1352 1514 2054 2521 2930 3096 3636 4062
DpnI	24	
DraI	3	3005 3024 3716
DrdI	2	1939 2354
DsaI	2	299 1218
EaeI	5	170 302 710 1215 3527
EagI	1	710
Eam1105I	1	3139
EarI	2	2130 3934
EciI	4	1166 2320 2466 3294
Eco47III	3	267 548 1500
Eco57I	2	2794 3806
EcoNI	1	397
EcoO109I	4	295 1210 1252 4115
EcoRI	1	4132
EcoRII	5	829 1212 2272 2393 2406
FauI	10	124 467 669 816 1011 1261 1542 1728 1949 1959
FokI	10	771 816 1465 1527 1605 1791 1932 3105 3286 3573
FspI	3	1129 1227 3361
GdiII	4	170 302 710 3527
HaeI	7	691 763 820 1217 2261 2272 2724
HaeII	10	188 209 269 323 550 980 1419 1502 2124 2494
HaeIII	20	
HgaI	11	
HgiEII	1	2832
HhaI	28	
Hin4I	3	912 3138 3212
HincII	2	424 3680
HinfI	11	
HphI	11	
MaeII	10	672 728 1317 1341 1571 1997 2949 3365 3738 4058
MaeIII	15	
MboII	11	
MmeI	2	2461 2645
MnlI	25	
MscI	1	1217
MseI	16	
MslI	7	802 1233 1428 1819 3391 3550 3909
MspI	24	
MspA1I	6	912 1837 1956 2588 2833 3774
MwoI	27	
NarI	4	185 206 320 977
NciI	9	306 1030 1256 1584 1890 1925 2626 3322 3673
NdeI	1	44
NgoAIV	4	172 540 700 1054
NheI	1	37
NlaIII	25	
NlaIV	21	
NruI	1	745
NspI	4	337 1591 1883 2250
Pfl1108I	2	529 3157
PflMI	2	1092 1141
PleI	5	123 411 2140 2625 3128
PshAI	1	487
Psp5II	2	1210 1252
Psp1406I	4	672 1571 3365 3738
PstI	1	3384
PvuI	1	3509

Enzyme	# Sites	Locations
PvuII	1	1837
RcaI	4	260 2966 3974 4079
RsaI	2	2052 3619
SalI	1	422
SapI	1	2130
Sau96I	14	
Sau3AI	24	
ScaI	1	3619
ScrFI	14	
SfaNI	19	
SfcI	4	108 2511 2702 3380
SgrAI	1	181
SphI	1	337
SspI	1	3943
StyI	1	1140
TaqI	7	137 145 423 898 1039 2346 3790
TaqII	6	441 2148 3487 3672 3825 3842
TfiI	6	623 777 1075 1296 1800 2221
ThaI	24	
TseI	20	
Tsp45I	7	651 918 1685 1898 1993 3395 3606
Tsp509I	8	74 124 1090 1104 3006 3312 3567 4132
Tth111I	1	1991
Tth111II	4	1707 2836 2843 2875
UbaJI	19	
VspI	2	123 3311
XbaI	1	82
XmnI	2	1804 3738

Enzymes that do not cut pET-5a:

AflII	AgeI	ApaI	AscI	AvrII
BaeI	BclI	BmgI	Bpu1102I	BsaXI
BseRI	BsrGI	BssHII	BstEII	BstXI
Bsu36I	ClaI	DraIII	DrdII	EcoRV
FseI	HindIII	HpaI	KpnI	MluI
MunI	NcoI	NotI	NsiI	NspV
PacI	PmeI	PmlI	RleAI	RsrII
SacI	SacII	SexAI	SfiI	SgfI
SmaI	SnaBI	SpeI	SrfI	Sse8387I
StuI	SunI	SwaI	XcmI	XhoI