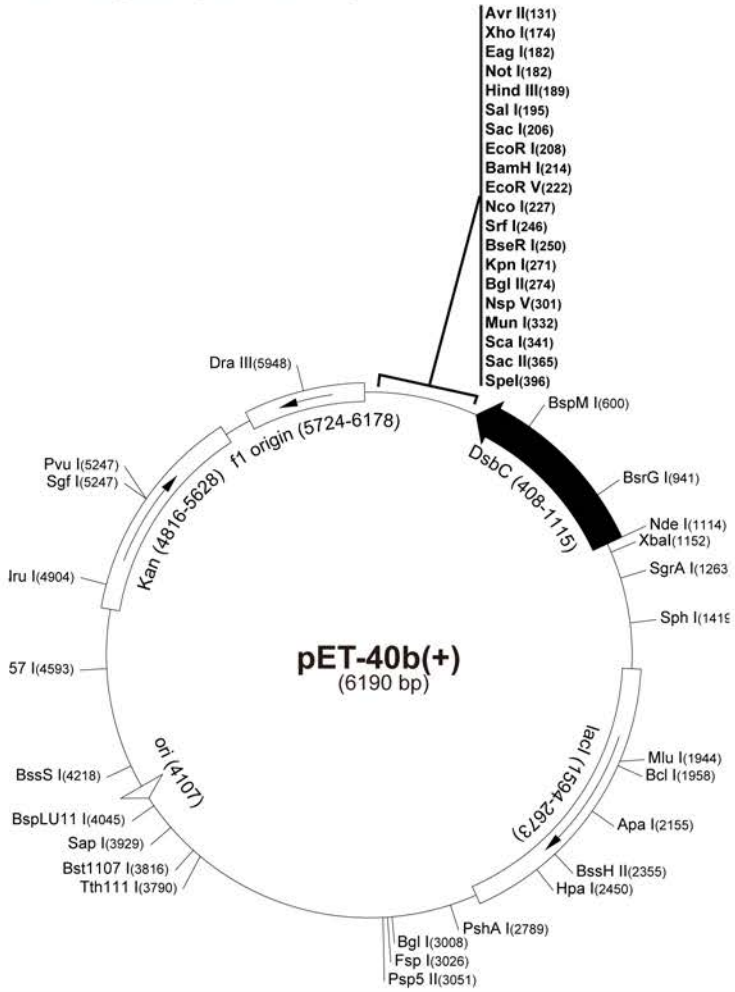
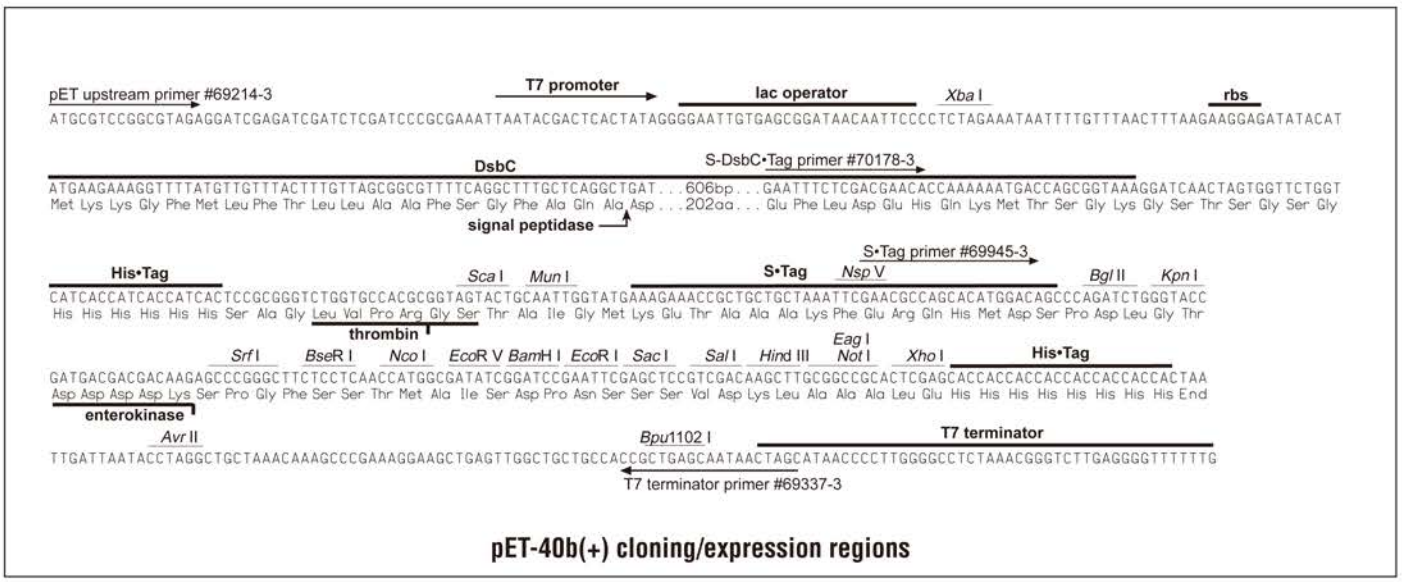
pET-40b(+) Vector

The pET-40b(+) vector (Cat. No. 70091-3) is designed for expression of DsbC fusion proteins. 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 circle map. The cloning/expression region of the coding strand transcribed by T7 RNA polymerase is shown below. The f1 origin is oriented so that infection with helper phage will produce virions containing single stranded DNA that corresponds to the coding strand. Therefore, single stranded sequencing should be performed using the T7 terminator primer (Cat. No. 69337-3).

pET-40b(+) sequence landmarks

T7 promoter	1187-1203
T7 transcription start	1186
DsbC•Tag™ coding seq.	408-1115
His•Tag® coding sequence	369-386
S•Tag™ coding sequence	282-326
Multiple cloning sites	
(*Srf* I - *Xho* I)	174-250
His•Tag coding sequence	150-173
T7 terminator	26-72
lacI coding sequence	1594-2673
pBR322 origin	4107
Kan coding sequence	4816-5628
f1 origin	5724-6178





pET-40b(+) cloning/expression regions

pET-40b(+) Restriction Sites

Enzyme	# Sites	Locations
AccI	2	196 3815
AciI	86	
AflIII	3	790 1944 4045
AluI	25	
AlwI	14	
Alw26I	6	1641 2046 2172 2559 3686 5263
AlwNI	2	677 4461
ApaI	1	2155
ApaLI	3	1924 3859 4359
ApoI	8	208 303 441 2219 4860 5044 5750 5761
AvaI	3	174 244 5119
AvaII	5	2496 2872 2960 3051 3330
AvrII	1	131
BamHI	1	214
BanI	10	267 352 1266 1287 1401 1864 2583 2713 2839 5985
BanII	7	206 251 1328 1342 2155 4902 6023
BbsI	5	963 2090 2429 2803 3163
BbvI	26	
BcgI	4	210 2236 2804 3656
BcgI*	4	176 2270 2770 3622
BclI	1	1958
BfaI	8	70 132 397 1153 3059 4540 4847 6099
BglI	1	3008
BglII	1	274
BpmI	4	1782 2271 2905 3572
Bpu10I	3	1059 3151 5264
Bpu1102I	2	80 493
BsaAI	2	3797 5948
BsaBI	3	1217 1227 3242
BsaHI	6	532 1267 1288 1402 1901 2584
BsaJI	14	
BsaWI	8	2 877 2263 2766 3234 4251 4398 5382
BseRI	1	250
BsgI	3	1795 1995 3205
BsiEI	5	185 2729 3961 4385 5247
BsiHKAI	7	175 206 1444 1928 3039 3863 4363
BsiI	30	
BsmI	3	838 5131 5208
BsmBI	3	2559 3686 5263
BsmFI	4	1405 2946 3316 6163
Bsp1286I	13	
BspEI	2	2 3234
BspLU11I	1	4045
BspMI	1	600
BsrI	22	
BsrBI	4	1173 3978 5646 6092
BsrDI	3	487 1991 2357
BsrFI	7	1254 1263 1630 2842 3002 5201 6049
BsrGI	1	941
BssHII	1	2355
BssSI	1	4218
Bst1107I	1	3816
BstEII	2	467 2125
BstXI	3	1746 1875 1998
BstYI	8	214 274 1508 2720 3237 4686 4697 5496
Cac8I	42	
ClaI	2	1221 4938
CviJI	97	
DdeI	12	
DpnI	25	
DraIII	1	5948

Enzyme	# Sites	Locations
DrdI	3	3738 4153 5903
DsaI	4	227 362 1381 3017
EaeI	4	182 1252 1384 2618
EagI	1	182
EarI	3	1562 3929 5060
Eco47III	3	1349 2850 3299
Eco57I	1	4593
EcoNI	2	1479 5159
EcoO109I	3	53 1377 3051
EcoRI	1	208
EcoRII	10	676 1667 1982 2522 2579 4071 4192 4205 5135 5492
EcoRV	1	222
FauI	20	
Fnu4HI	49	
FokI	9	1990 1999 3264 3326 3404 3590 3731 4885 5491
FspI	1	3026
HaeII	15	
HaeIII	24	
HgaI	14	
HhaI	51	
HincII	2	197 2450
HindIII	1	189
HinfI	18	
HpaI	1	2450
HphI	22	
KpnI	1	271
MaeIII	19	
MboII	14	
MluI	1	1944
MnlI	26	
MseI	27	
MslI	7	784 1996 2284 2314 3032 3227 3618
MspI	32	
MspA1I	12	
MunI	1	332
MwoI	43	
NarI	4	1267 1288 1402 2584
NciI	15	
NcoI	1	227
NdeI	1	1114
NgoAIV	4	1254 2842 3002 6049
NlaIII	28	
NlaIV	25	
NotI	1	182
NruI	1	4904
NsiI	2	5097 5363
NspI	4	1419 3390 3682 4049
NspV	1	301
PflMI	4	293 677 1526 5510
PleI	9	1201 1493 1580 2376 3939 4424 5479 5883 5891
PshAI	1	2789
Psp1406I	5	1031 1606 2974 3370 5733
Psp5II	1	3051
PvuI	1	5247
PvuII	3	2544 2637 3636
RcaI	3	1342 4765 5640
RsaI	7	269 341 512 943 2091 3851 5082
SacI	1	206
SacII	1	365
SalI	1	195
SapI	1	3929
Sau3AI	25	
Sau96I	15	
ScaI	1	341
ScrFI	25	
SfaNI	26	

Enzyme	# Sites	Locations
SfcI	5	983 1186 4310 4501 6167
SgfI	1	5247
SgrAI	1	1263
SmaI	2	246 5121
SpeI	1	396
SphI	1	1419
SrfI	1	246
SspI	2	5172 5740
StyI	3	57 131 227
TaiI	18	
TaqI	18	
TfiI	9	2623 2925 3095 3599 4020 5158 5214 5386 5477
ThaI	41	
TseI	26	
Tsp45I	8	867 2125 2953 3484 3697 3792 5394 6121
Tsp509I	25	
TspRI	12	
Tth111I	1	3790
VspI	6	139 1201 2629 2688 5446 5635
XbaI	1	1152
XcmI	5	542 567 1800 2316 2334
XhoI	1	174
XmnI	2	3603 5636

Enzymes that do not cut pET-40b(+):

AatII	AflII	AhdI	AscI	BsaI
Bsu36I	DraI	FseI	MscI	NheI
PacI	PinAI	PmeI	PmlI	PstI
RsrII	SanDI	SexAI	SfiI	SnaBI
Sse8387I	StuI	SunI	SwaI	UbaEI