pSTBlue-1 Vector

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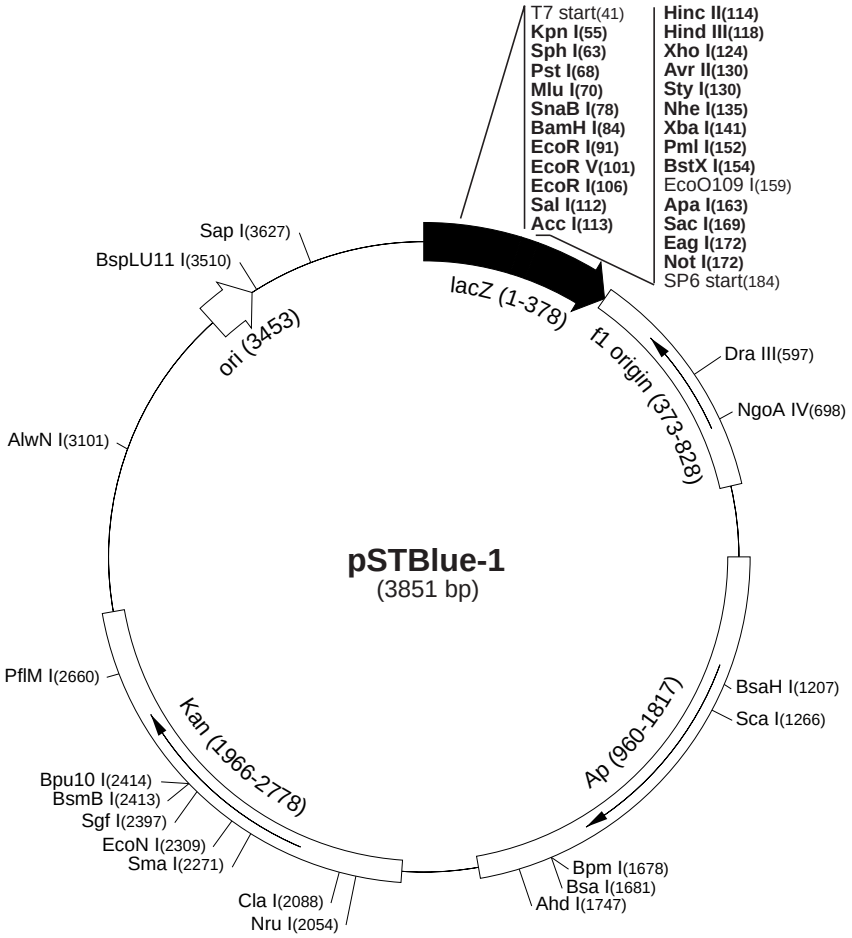
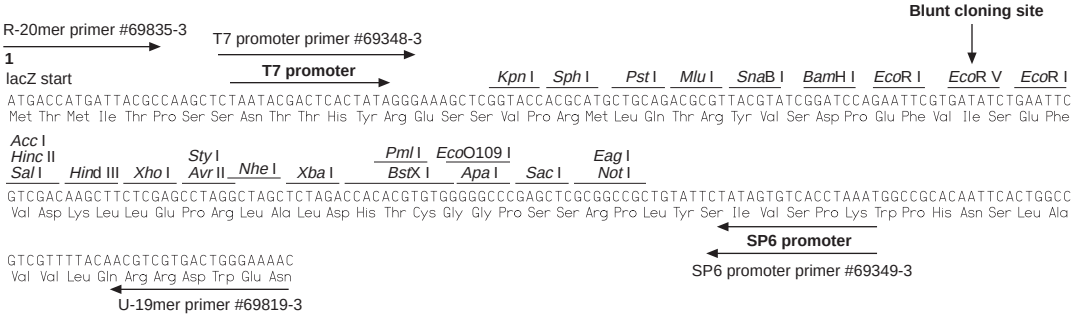
pSTBlue-1 is a multi-purpose cloning vector featuring a versatile multiple cloning region, blue/white screening, dual opposed T7/SP6 promoters and dual kanamycin/ampicillin resistance. Restriction sites producing 4-base 3' overhangs are conveniently positioned near each end of the polylinker to facilitate the generation of unidirectional deletions using exonuclease III. Unique sites are shown on the circle map. The coding strand for transcription from the T7 promoter is shown below. The f1 origin in pSTBlue-1 is oriented so that infection with helper phage will produce virions containing single stranded DNA that is complementary to the strand shown below. Therefore, single stranded sequencing should be performed using the T7 promoter primer (Cat. No. 69348-3) or R-20mer primer (Cat. No. 69835-3).

pSTBlue-1 sequence landmarks

lacZ start codon	1
lacZ α-peptide ORF	1-378
T7 promoter	24-40
T7 transcription start	41
multiple cloning region (*Kpn* I - *Not* I)	51-178
SP6 promoter	185-202
SP6 transcription start	184
f1 origin	373-828
bla coding sequence	960-1817
Kan coding sequence	1966-2778
pUC origin	3453





pSTBlue-1 cloning/expression region

pSTBlue-1 Restriction Sites

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Enzyme	# Sites	Locations
AccI	1	113
AciI	36	
AflIII	4	70 149 151 3510
AhdI	1	1747
AluI	19	
AlwI	12	
Alw26I	3	905 1681 2413
AlwNI	1	3101
ApaI	1	163
ApaLI	2	1075 3196
ApoI	6	91 106 399 410 2010 2194
AvaI	3	124 162 2269
AvaII	2	1383 1605
AvrII	1	130
BamHI	1	84
BanI	4	51 634 1794 3766
BanII	4	163 169 672 2052
BbvI	13	
BcgI	1	1243
BcgI'	1	1209
BfaI	8	131 136 142 748 1554 1889 1997 3017
BglI	2	362 1629
BpmI	1	1678
Bpu10I	1	2414
BsaI	1	1681
BsaAI	3	78 152 597
BsaHI	1	1207
BsaJI	7	130 252 2268 2269 2670 3350 3771
BsaWI	4	1451 2532 3157 3304
BsiEI	7	175 333 1229 1378 2397 3176 3600
BsiHKAI	4	169 1079 1164 3200
BsiI	10	493 819 2311 2643 2660 3032 3311 3477 3495 3669
BsmI	2	2281 2358
BsmBI	1	2413
Bsp1286I	7	163 169 672 1079 1164 2052 3200
BspLU11I	1	3510
BsrI	13	
BsrBI	4	741 905 3581 3822
BsrDI	2	1513 1687
BsrFI	3	698 1662 2351
BssSI	2	1078 3337
BstXI	1	154
BstYI	8	84 1100 1117 1885 1897 2646 2858 2869
Cac8I	19	
ClaI	1	2088
CviJI	61	
DdeI	6	1246 1786 2414 2778 2827 3236
DpnI	18	
DraI	3	1169 1861 1880
DraIII	1	597
DrdI	2	552 3408
EaeI	5	172 202 218 1354 3671
EagI	1	172
EarI	4	311 948 2210 3627
Eco57I	2	1081 2968
EcoNI	1	2309
EcoO109I	1	159
EcoRI	2	91 106
EcoRII	7	252 2285 2642 3349 3362 3483 3771
EcoRV	1	101
FauI	5	331 734 803 3670 3712
Fnu4HI	25	

Enzyme	# Sites	Locations
FokI	6	272 1308 1595 1776 2035 2641
FspI	2	352 1524
HaeII	4	748 756 3270 3640
HaeIII	17	
HgaI	5	78 814 1215 2820 3398
HhaI	24	
HincII	1	114
HindIII	1	118
HinfI	13	
HphI	12	
KpnI	1	55
MaeIII	17	
MboII	10	328 737 965 1074 1152 1907 2197 2308 2853 3644
MluI	1	70
MnlI	14	
MseI	22	
MslI	5	152 198 976 1335 1494
MspI	14	
MspA1I	6	177 302 1111 2927 3172 3690
MwoI	19	
NciI	5	1211 1562 2270 2271 3133
NgoAIV	1	698
NheI	1	135
NlaIII	14	
NlaIV	15	
NotI	1	172
NruI	1	2054
NsiI	2	2247 2513
NspI	2	63 3514
PflMI	1	2660
PleI	7	24 532 540 1756 2629 3134 3619
PmlI	1	152
Psp1406I	2	1145 1518
PstI	1	68
PvuI	3	333 1378 2397
PvuII	2	302 3690
RcaI	3	907 1915 2790
RsaI	3	53 1266 2232
SacI	1	169
SalI	1	112
SapI	1	3627
Sau3AI	18	
Sau96I	8	159 160 321 588 1383 1605 1622 1701
ScaI	1	1266
ScrFI	12	
SfaNI	10	1046 1295 1486 2013 2097 2232 2319 2439 2750 3413
SfcI	7	36 64 185 816 1501 3054 3245
SgfI	1	2397
SmaI	1	2271
SnaBI	1	78
SphI	1	63
SspI	3	389 942 2322
StyI	1	130
TaiI	11	
TaqI	8	113 125 630 1093 2088 2362 2765 3412
TfiI	6	2308 2364 2536 2627 3536 3676
ThaI	16	
TseI	13	
Tsp45I	6	191 238 770 1274 1485 2544
Tsp509I	19	
TspRI	12	
VspI	5	1572 2596 2785 3682 3741

Enzyme	# Sites	Locations
XbaI	1	141
XhoI	1	124
XmnI	2	1147 2786

Enzymes that do not cut pSTBlue-1:

AatII	AflII	AscI	BbsI	BclI
BglII	Bpu1102I	BsaBI	BseRI	BsgI
BsmFI	BspEI	BspMI	BsrGI	BssHII
Bst1107I	BstEII	Bsu36I	DsaI	Eco47III
FseI	HpaI	MscI	MunI	NarI
NcoI	NdeI	NspV	PacI	PinAI
PmeI	PshAI	Psp5II	RsrII	SacII
SanDI	SexAI	SfiI	SgrAI	SpeI
SrfI	Sse8387I	StuI	SunI	SwaI
Tth111I	UbaEI	XcmI		