T7Select®10-3b Vector

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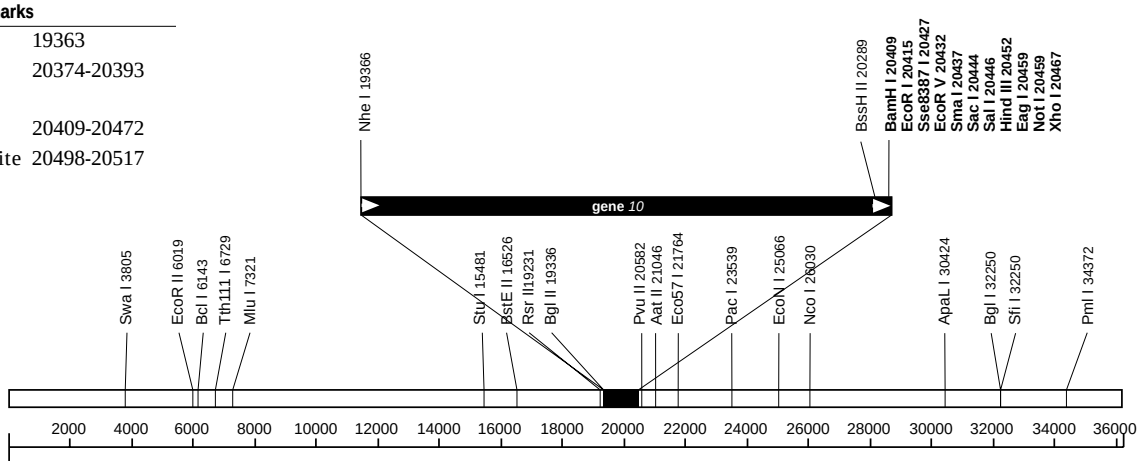
The T7Select®10-3b vector is a protein display vector based on bacteriophage T7. The vector displays an average of 5–15 copies of peptides and proteins up to 1200 aa in size on the surface of the T7 capsid. Target sequences are fused to the C-terminus of the 10B capsid protein near amino acid 348. T7Select10 phage are grown on a complementing host (BLT5403) that supplies large amounts of the 10A capsid protein from a plasmid. Capsids thus contain mostly 10A protein, along with 5–15 copies of 10B fusion protein per virion.

The linear genome of T7Select10-3b is 36,249 bp in size. Unique restriction sites are shown on the maps below (cloning sites are shown in **bold** type on the line map).

T7Select10-3b sequence landmarks

10B translation start	19363
T7SelectUP priming site	20374-20393
Multiple cloning region (*Bam*H I - *Xho* I)	20409-20472
T7SelectDOWN priming site	20498-20517



T7Select10-3b
(36,249bp)

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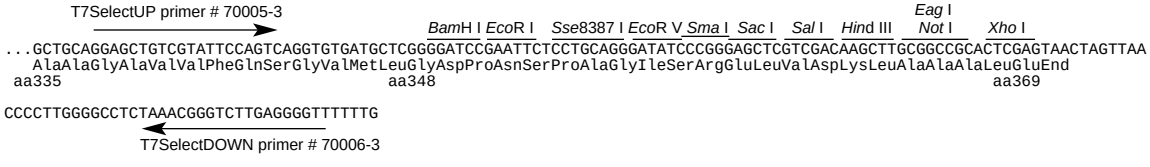
gene 10B ®                 insert                 
left arm...GATCCG     AATTXXXX(N)XXXX     AGCTT...right arm
left arm...CTAGGCTTAA     XXXX(N)XXXXTCGA     A...right arm
        ...AspPro     AsnPhe...
                      AsnLeu...
                      AsnSer...
                      AsnTyr...
                      AsnCys...
                      AsnTrp...
```

Reading frame of inserts cloned into *Eco*R I/*Hin*d III T7Select10-3b vector arms.
The inserts require a 5'-AATT "sticky end" on the top strand (amino terminal side) and a 5'-AGCT "sticky end" on the bottom strand, either created with oligonucleotides or by *Eco*R I/*Hind* III digestion. The reading frame requires the AAT (Asn) initial codon, followed by a TXX codon (possible second amino acids are shown). Use of *Eco*R I cleavage products places C in the second position, resulting in a TCX codon (Ser).



T7Select10-3b cloning region

T7Select®10-3b Restriction Sites

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Enzyme	# Sites	Locations
AatII	1	21046
AccI	31	
AciI	176	
AflII	16	
AflIII	21	
AhdI	11	
AluI	125	
AlwI	3	20404 20417 32407
Alw26I	89	
AlwNI	16	
ApaLI	1	30424
ApoI	13	
AvaI	7	8344 12362 20404 20435 20467 22431 26394
AvaII	54	
AvrII	3	16464 27875 29534
BamHI	1	20409
BanI	32	
BanII	2	16066 20444
BbsI	35	
BbvI	103	
BcgI	19	
BcgI'	19	
BclI	1	6143
BfaI	51	
BglI	1	32250
BglII	1	19336
BpmI	21	
Bpu10I	38	
Bpu1102I	19	
BsaI	27	
BsaAI	35	
BsaBI	7	870 1015 4982 8993 15364 16449 33934
BsaHI	7	339 8773 8916 20603 21043 21968 31817
BsaJI	82	
BsaWI	32	
BseRI	10	10085 10097 13966 16422 18878 27318 27747 35396 35560 35706
BsgI	18	
BsiEI	17	
BsiHKAI	26	
BsiI	86	
BsmI	13	
BsmBI	14	
BsmFI	43	
Bsp1286I	40	
BspLU11I	6	799 11802 15602 15723 15769 33883
BspMI	17	
BsrI	111	
BsrBI	14	
BsrDI	15	
BsrFI	3	19789 32022 33777
BsrGI	10	1949 3348 8546 17337 21651 22727 23153 28624 32174 34814
BssHII	1	20289
BssSI	30	
Bst1107I	8	5511 15973 19727 20776 23451 24803 25083 35941
BstEII	1	16526
BstXI	9	1702 7465 7937 11857 12196 24271 25755 30975 35277
BstYI	3	19336 20409 32399
Bsu36I	28	
Cac8I	97	
ClaI	3	19317 23412 33392
CviJI	515	
DdeI	264	
DpnI	8	6145 6248 8996 10816 19338 20411 31998 32401

Enzyme	# Sites	Locations
DraI	9	276 441 3805 4333 8555 13331 16758 27683 36060
DraIII	15	
DrdI	10	538 4041 4796 13663 14048 14515 28472 29322 31059 31233
DsaI	25	
EaeI	3	20459 31850 32251
EagI	1	20459
EarI	44	
Eco57I	1	21764
EcoNI	1	25066
EcoO109I	22	
EcoRI	1	20415
EcoRII	1	6019
EcoRV	1	20432
FauI	21	
Fnu4HI	140	
FokI	87	
FspI	6	1970 12125 21766 25178 26116 31627
HaeII	25	
aeIII	62	
HgaI	60	
HhaI	92	
HincII	57	
HindIII	1	20452
HinfI	200	
HpaI	18	
HphI	93	
KpnI	5	41 3449 7024 20141 36130
MaeIII	196	
MboII	131	
MluI	1	7321
MnlI	309	
MscI	2	31852 32253
MseI	187	
MslI	38	
MspI	56	
MspA1I	28	
MunI	8	3571 11038 14199 17888 17994 30474 31759 32699
MwoI	147	
NarI	2	8916 31817
NciI	9	537 11159 12134 18300 19589 20436 20437 24674 34034
NcoI	1	26030
NdeI	6	3507 4195 10767 16415 24038 30043
NheI	1	19366
NlaIII	127	
NlaIV	95	
NotI	1	20459
NruI	3	1103 23878 25031
NsiI	7	6585 16450 18439 26313 34637 35450 35609
NspI	21	
NspV	5	3849 9639 15675 19322 27749
PacI	1	23539
PflMI	7	7148 15226 22169 31137 32341 32704 34346
PinAI	2	32022 33777
PleI	103	
PmeI	2	276 8555
PmlI	1	34372
PshAI	4	12529 25316 26045 34930
Psp1406I	17	
Psp5II	12	
PstI	2	20373 20427
PvuII	1	20585
RcaI	10	2903 4800 8906 12941 14716 17049 24161 25220 30745 35217
RsaI	157	

Enzyme	# Sites	Locations
RsrII	1	19231
SacI	1	20444
SalI	1	20446
SanDI	3	11865 22707 24905
SapI	4	7063 11249 16607 33367
Sau3AI	8	6143 6246 8994 10814 19336 20409 31996 32399
Sau96I	78	
ScaI	4	11977 30414 35164 35306
ScrFI	10	537 6021 11159 12134 18300 19589 20436 20437 24674 34034
SfaNI	83	
SfcI	45	
SfiI	1	32250
SmaI	1	20437
SnaBI	13	
SpeI	3	5526 13739 20475
Sse8387I	1	20427
SspI	6	7446 23544 28843 31802 32267 32546
StuI	1	15481
StyI	35	
SwaI	1	3805
TaiI	156	
TaqI	97	
TfiI	97	
ThaI	60	
TseI	103	
Tsp45I	99	
Tsp509I	71	
TspRI	82	
Tth111I	1	6729
UbaEI	5	1780 6602 7218 7787 14195
VspI	10	387 435 8326 14987 15849 21133 23568 27154 31072 35523
XbaI	2	10309 30606
XcmI	7	13850 17255 17417 25607 25682 26028 26649
XhoI	1	20467
XmnI	12	

Enzymes that do not cut T7Select10-3b:

ApaI	AscI	BspEI	Eco47III	FseI
NgoAIV	PvuI	SacII	SexAI	SgfI
SgrAI	SphI	SrfI	SunI	