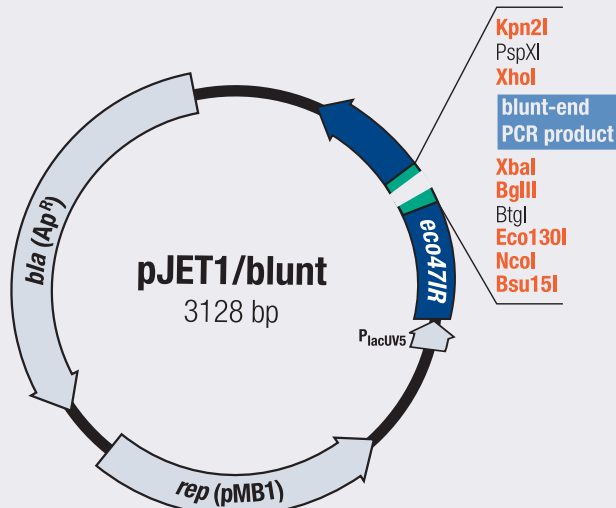


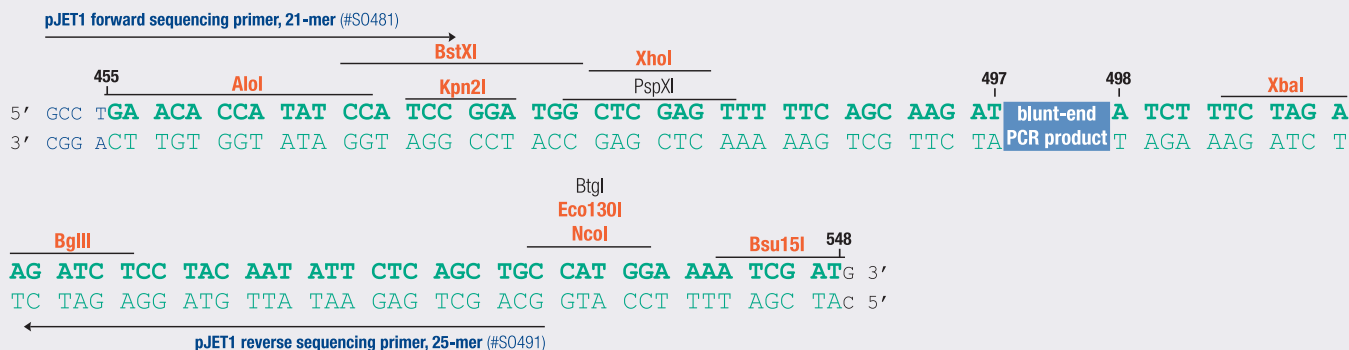
Map and Features of pJET1/blunt Cloning Vector

Available with the **GeneJET™ PCR Cloning Kit** (#K1221, #K1222)

pJET1/blunt vector map



DNA sequence of MCS region



Genetic elements of the pJET1/blunt cloning vector

Element	Function	Position, bp
rep (pMB1)	A replicon (rep) from the pMB1 plasmid is responsible for the replication of pJET1	1294-1908
Replication start	Initiation of the replication	1308 ± 1
<i>bla</i> (Ap ^R)	β-lactamase gene conferring resistance to ampicillin. Used for selection and maintenance of recombinant <i>E. coli</i> cells	2068-2928
<i>eco47IR</i>	Lethal gene <i>eco47IR</i> enables positive selection of the recombinants	187-879
P _{lacUV5}	Modified P _{lac} promoter for expression of the <i>eco47IR</i> gene at a level sufficient to provide positive selection without IPTG induction	895-1018
Multiple cloning site (MCS)	Mapping, screening and excision of the cloned insert	545-470
Cloning site	Blunt DNA ends for ligation with insert	497-498
Primer binding sites:		
pJET1 Forward Sequencing	Sequencing of insert, colony PCR	451-471
pJET1 Reverse Sequencing	Sequencing of insert, colony PCR	534-510

Primer sequences

Primer	Sequence
pJET1 Forward Sequencing Primer, 21-mer	5'-GCCTGAACACCATATCCATCC-3'
pJET1 Reverse Sequencing Primer, 25-mer	5'-GCAGCTGAGAATATTGTAGGAGATC-3'

Restriction enzymes that do not cut pJET1/blunt DNA

AarI, Acc65I, AjiI, Ajul, AlfI, BaeI, BclI, BcuI, BoxI, BplI, Bpu1102I, BseJI, BseRI, BsgI, BshTI, Bsp68I, Bsp1407I, Bst1107I, BstAPI, BtgZI, Cfr42I, CpoI, CspCI, Eco81I, Eco91I, Eco105I, Eco147I, EheI, Fall, FseI, FspAI, KpnI, KspAI, MlsI, MluI, Mph1103I, NdeI, OliI, PacI, Pasi, Paul, PdiI, Pfl23II, PslI, Psp5II, PsrI, Psyl, SanDI, Sdal, SexAI, Sfil, Sgfl, SgrAI, Sgsl, SrfI, TstI, Van91I, XagI, XcmI, XmaJI.

Enzymes produced by Fermentas are shown in orange.

Enzymes which cut pJET1/blunt DNA once

Adel	291	Eco72I	173
AloI	455	EcoRI	178
Apal	1030	FaqI	274
BamHI	1023	GsuI	2226
BbvCI	843	HincII	168
BceAI	1734	HindIII	750
BcgI	2657	Kpn2I	469
BfiI	2186	LguI	1125
BglI	2255	MssI	887
BglII	509	MunI	1018
BpiI	229	Mva1269I	848
Bpu10I	843	NcoI	534
BsaXI	1101	NheI	146
BseYI	1552	NotI	154
Bsp119I	181	Nsbl	2361
Bsp120I	1030	PaeI	150
BspTI	141	Pdml	2736
BstXI	466	PfoI	46
Bsu15I	543	Ppu21I	173
BtgI	534	PspXI	477
BveI	390	PstI	1036
CaI	1659	PvuI	2508
Cfr10I	2221	RsaI	2620
Cfr9I	1027	SacI	162
Csp6I	2620	Sall	168
Eam1105I	2136	Scal	2619
Ecl136II	162	Smal	1027
Eco130I	534	TatI	2619
Eco31I	2208	XbaI	503
Eco47III	1040	XhoI	478
Eco52I	155	XmiI	168