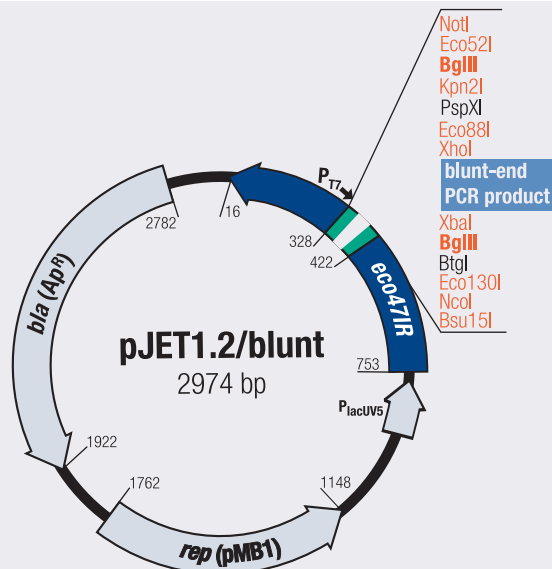


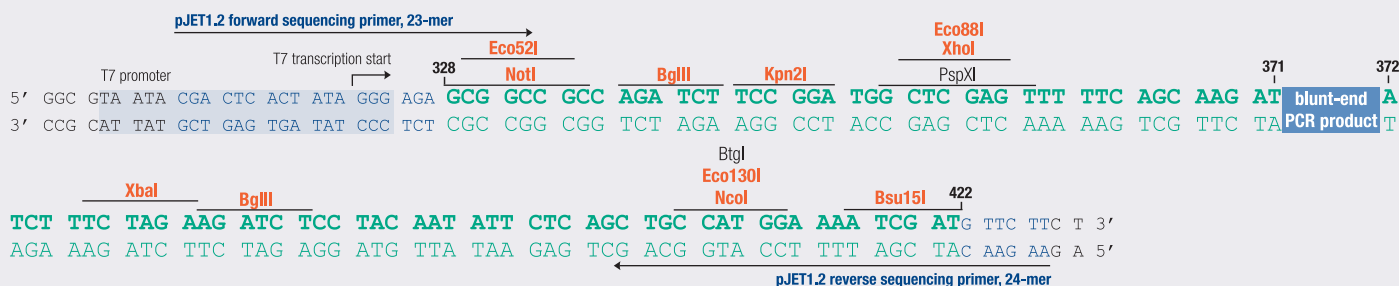
Map and Features of pJET1.2/blunt Cloning Vector

Available with the **CloneJET™ PCR Cloning Kit** (#K1231, #K1232)

pJET1.2/blunt vector map



DNA sequence of MCS region



Genetic elements of the pJET1.2/blunt cloning vector

Element	Function	Position, bp
rep (pMB1)	Replicon (rep) from the pMB1 plasmid is responsible for the replication of pJET1.2	1762-1148
Replication start	Initiation of the replication	1162 ±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	2782-1922
<i>eco47IR</i>	Lethal gene <i>eco47IR</i> enables positive selection of the recombinants	753-16
P _{lacUV5}	Modified P _{lac} promoter for expression of the <i>eco47IR</i> gene at a level sufficient to provide positive selection	892-769
T7 promoter	T7 RNA polymerase promoter for <i>in vitro</i> transcription of the cloned insert	305-324
Multiple cloning site (MCS)	Mapping, screening and excision of the cloned insert	422-328
Insertion site	Blunt DNA ends for ligation with insert	371-372
Primer binding sites:		
pJET1.2 forward sequencing	Sequencing of insert, colony PCR	310-332
pJET1.2 reverse sequencing	Sequencing of insert, colony PCR	428-405

Primer sequences

Primer	Sequence
pJET1.2 Forward Sequencing Primer, 23-mer	5'-CGACTCACTATAGGGAGAGCGGC-3'
pJET1.2 Reverse Sequencing Primer, 24-mer	5'-AAGAACATCGATTTCCATGGCAG-3'

Enzymes which cut pJET1.2/blunt DNA once

AasI	1204	GsuI	2080
AdelI	120	HindIII	624
Alol	284	Kpn2I	343
BfiI	2040	LguI	979
BglI	2109	MssI	761
BpiI	58	MunI	892
Bpu10I	717	Mva1269I	722
Bsu15I	417	NcoI	408
BveI	219	NotI	328
CaII	1513	NsbI	2215
Cfr10I	2075	Pdml	2590
Csp6I	2474	PstI	5
Eam1105I	1990	PvuI	2362
Eco130I	408	RsaI	2474
Eco31I	2062	Scal	2473
Eco52I	329	Smul	951
Eco88I	352	TatI	2473
Esp3I	739	XbaI	377
FaqI	103	XhoI	352

Enzymes that do not cut pJET1.2/blunt DNA

AarI, Acc65I, AjiI, Ajul, Alfi, Apal, BamHI, BclI, BcuI, BoxI, BpiI, Bpu1102I, BseJI, BshTI, Bsp68I, Bsp119I, Bsp120I, Bsp1407I, BspTI, Bst1107I, BstXI, Cfr9I, Cfr42I, CpoI, Ecl136II, Eco24I, Eco32I, Eco47III, Eco72I, Eco81I, Eco91I, Eco105I, Eco147I, Eco0109I, EcoRI, Ehel, FspAI, HincII, KpnI, KspAI, MlsI, MluI, Mph1103I, NdeI, NheI, OiiI, Pael, Pasi, Paul, Pdii, Pfl23II, PfoI, Ppu21I, Psp5II, Psyl, SacI, Sall, Sdal, Sfil, Sgfi, SgsI, Smal, TstI, Van91I, XagI, XcmI, XmaJI.

Enzymes produced by Fermentas are shown in orange.