



# BigEasy® v2.0 Linear Cloning System

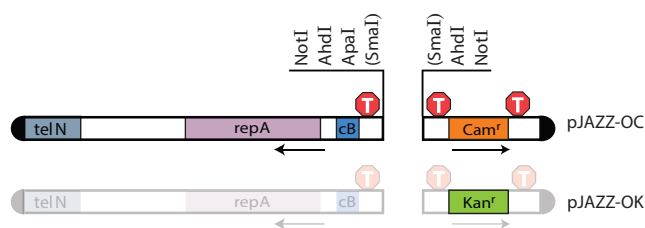
Maximum insert stability

- Clone "unclonable" DNA with this unique, high-efficiency system
- Stabilize up to 30 kb of difficult DNA sequence
- Create bias-free libraries from A/T-rich or G/C-rich genomes
- Clone gene clusters or operons

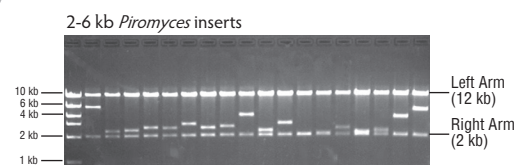
BigEasy Systems containing the unique pJAZZ vector are ideal for cloning large DNA fragments, and for your most difficult DNA sequences that do not clone in other cloning vectors. Choose BigEasy for cloning single inserts up to 30 kb, or constructing bias-free, large-insert genomic libraries. The novel design of the pJAZZ vector includes multiple functional advantages over other vectors.

- pJAZZ is maintained as a linear molecule, so the vector does not supercoil. The ends of the vector can rotate freely (Fig. 1) reducing torsional stress.
- pJAZZ is maintained at low copy number (5-10/cell) in BigEasy-TSA™ Electrocompetent Cells, which are required for transformation and propagation. The copy number can be induced 5-10X for efficient DNA recovery and the vector can be isolated with standard plasmid prep methods.
- pJAZZ incorporates Lucigen's CloneSmart® technology for transcription-free cloning, which further increases insert stability.

These unique advantages allow BigEasy Systems to stabilize large, repetitive, A/T-rich and G/C-rich or otherwise unclonable sequences (Fig. 2 and 3).

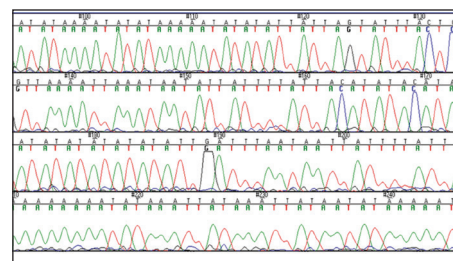


**Figure 1.** pJAZZ-OC and pJAZZ-OK linear vectors. RepA, replication factor and low copy origin of replication (~5-10 per cell; inducible 5-10 fold); Cam<sup>r</sup> - chloramphenicol resistance gene; Kan<sup>r</sup> - kanamycin resistant gene; telN - protomerase gene; cB - replication regulator. Approximate positions of transcription terminators (T) are indicated.



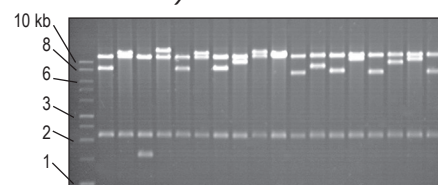
**Figure 2a.** *Piromyces* (85% AT) cloned in the pJAZZ vector. This DNA was unclonable in all other vectors.

## 96% AT rich DNA



**Figure 2b.** Sequence trace of a *Piromyces* clone showing extremely high AT content (96%).

## 6-20 kb Oxytricha inserts



**Figure 3.** *Oxytricha trifallax* genomic DNA (75-85% AT) was sheared to 6-20 kb and cloned into the pJAZZ linear vector. NotI digests of mini-prep DNA are shown.



## BigEasy® v2.0 Linear Cloning System cont.

Products	Size	VWR Cat. No.
BigEasy v2.0 Linear Cloning Kit (pJAZZ-OC Blunt Vector) w/BigEasy-TSA Electrocompetent Cells (SOLOs)	5 reactions	95024-148
	10 reactions	95024-150
	20 reactions	95024-152
BigEasy v2.0 Linear Cloning Kit (pJAZZ-OC NotI Vector) w/BigEasy-TSA Electrocompetent Cells (SOLOs)	5 reactions	95024-154
	10 reactions	95024-156
	20 reactions	95024-158
BigEasy v2.0 Linear Cloning Kit (pJAZZ-OK Blunt Vector) w/BigEasy-TSA Electrocompetent Cells (SOLOs)	5 reactions	95037-242
	10 reactions	95037-244
	20 reactions	95037-246
BigEasy v2.0 Linear Cloning Kit (pJAZZ-OK NotI Vector) w/BigEasy-TSA Electrocompetent Cells (SOLOs)	5 reactions	95037-248
	10 reactions	95037-250
	20 reactions	95037-252
BigEasy-TSA Electrocompetent Cells ( $\geq 4 \times 10^{10}$ cfu/ $\mu$ g) (SOLOs)	6 reactions	95024-142
	12 reactions	95024-144
	24 reactions	95024-146

### ORDER INFORMATION

The BigEasy® Linear Cloning Kit includes: Dephosphorylated pJAZZ® Vector pre-cut at either a *Sma*I (blunt) or *Not*I site, CloneSmart® DNA Ligase, CloneDirect™ 10X Ligation Buffer (includes ATP), DNATerminator® End Repair Enzyme & 5X End Repair Buffer (Blunt Kit only), Sequencing Primers, Positive Control Insert DNA, BigEasy-TSA Electrocompetent Cells in SOLO packaging (1 transformation per tube), Recovery Medium, Transformation Control DNA, and complete protocols. BigEasy-TSA Electrocompetent Cells are also available separately.

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