

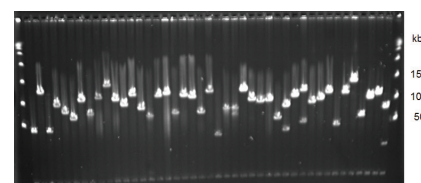


# CopyRight® v2.0 BAC Cloning Kits

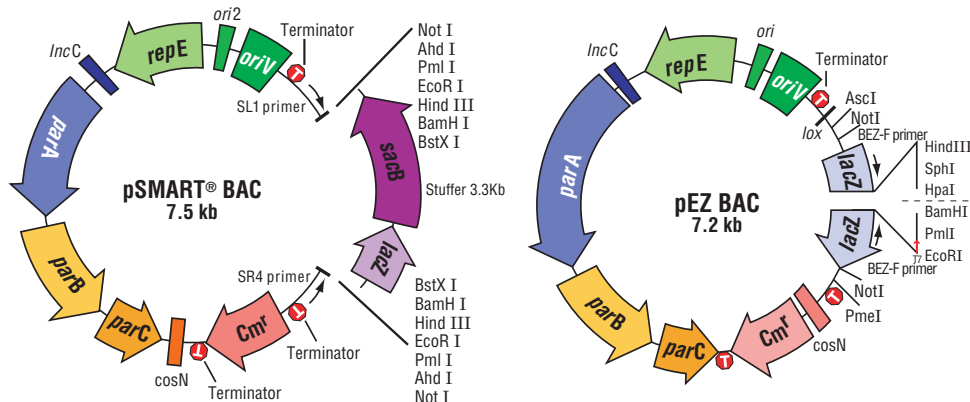
Efficiently clone any size insert up to 200 kb

- Create libraries from A/T- or G/C-rich genomes
- Clone gene clusters or operons
- High insert stability & inducible copy number

Lucigen's CopyRight® v2.0 BAC cloning kits offer unprecedented accuracy, reliability, and efficiency in BAC cloning and library construction. The pSMART® BAC or pEZ BAC vectors incorporate the CloneSmart® transcription-free technology to minimize cloning bias and enable cloning of otherwise toxic genes (Figure 1) and BAC-Optimized Replicator™ v2.0 Electrocompetent Cells along with inducible copy number amplification (20-50X) for high DNA yields and a lacZ-sacB stuffer fragment that eliminates uncut vector from recombinants, resulting in zero background. Unlike other BAC cloning systems, Lucigen's CloneSmart technology assures that even "unclonable" inserts are stably maintained. Sequences are not lost or rearranged in the cloning process. CopyRight Kits offer superior performance for BAC cloning at a much better price than other kits. Figure 2 shows an example of a Random Shear BAC library generated with pSMART BAC.



**Figure 2.** *Arabidopsis* Random Shear BAC Library in the pSMART BAC vector. 7,680 clones were obtained, with an average insert size of 105 kb and ~5X genome coverage.



**Figure 1.** CopyRight vectors pSMART BAC and pEZ BAC. ori2, repE, IncC - single-copy origin of replication; oriV - inducible origin of replication; par A,B,C - partition genes; Cmr - chloramphenicol-resistance gene; cosN - lambda packaging signal; T - CloneSmart transcription terminators; sacB - sucrose gene lacZ - alpha peptide of the beta galactosidase gene. Approximate positions of sequencing primers and transcription terminators are indicated.

## Convenient Success

Efficiently obtain your clone or create your library—the CopyRight v2.0 Cloning Kits eliminate tedious vector and competent cell preparation, as well as time-consuming QC experiments. Kits include optimized reagents, ligation-ready vector, highly efficient electrocompetent cells, detailed instructions, and a trouble-shooting guide.



Products	Cells Provided w/Kit	Size	VWR Cat. No.
CopyRight v2.0 pEZ BAC Blunt Cloning Kit	with Replicator v2.0 Electrocompetent Cells (DUOs)	10 reactions 20 reactions	95039-836 95039-838
	without cells	10 reactions	89002-644
CopyRight v2.0 BAC Cloning Kit, pSMART BAC BamHI	with Replicator v2.0 Electrocompetent Cells (DUOs)	10 reactions 20 reactions	95039-882 95039-884
CopyRight v2.0 BAC Cloning Kit, pSMART BAC HindIII	with Replicator v2.0 Electrocompetent Cells (DUOs)	10 reactions 20 reactions	95039-828 95039-830
CopyRight v2.0 Fosmid Cloning Kit		5 reactions	95025-520
		10 reactions	95025-522
		20 reactions	95025-524
BAC-Optimized Replicator v2.0 Electrocompetent Cells ( $\geq 1 \times 10^{10}$ cfu/ $\mu$ g)		12 reactions	95039-840
		24 reactions	95039-842

#### ORDER INFORMATION

**Each CopyRight® v2.0 Cloning Kit** contains: pre-cut CopyRight vector (pEZ™ BAC BamHI or pEZ BAC Blunt or pSMART® BAC BamHI, EcoRI, or HindIII), CopyRight DNA Ligase, CopyRight 5X Ligation Buffer (includes ATP), Positive Control Insert DNA, Arabinose Induction Solution, Sequencing Primers, and complete protocols. Kits with cells also include BAC-Optimized Replicator™ v2.0 Electrocompetent Cells ( $\geq 1 \times 10^{10}$  cfu/ $\mu$ g DNA) packaged in two transformations per tube (DUOs), Positive Control Plasmid, and Recovery Medium. BAC-Optimized Replicator v2.0 Electrocompetent Cells are also available separately.

**BAC-Optimized Replicator v2.0 Electrocompetent Cells** contain trfA gene necessary for conditional amplification of vector copy number. If copy amplification is not needed, CopyRight Kits can be used with Lucigen's *E. cloni*® 10G BAC-Optimized Electrocompetent Cells, or with any *E. coli* competent cells.

**Each CopyRight v2.0 Fosmid Cloning Kit** contains: pre-cut, dephosphorylated pSMART FOS blunt vector, CloneSmart DNA Ligase, CloneDirect™ 10X Ligation Buffer (includes ATP), DNATerminator End Repair Enzyme Mix and End Repair Buffer, Replicator FOS strain (glycerol stock), 20% Maltose Solution, 1M MgSO<sub>4</sub>, SM Buffer, Arabinose Induction Solution, Sequencing Primers, and complete protocols. The 20-reaction Kit is provided as two 10-reaction Kits.

F600-VWR0517 For research or investigational use only. ISO 13485 Certified



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