

Perfect results with any DNA

"We used the Lucigen pSMART vector system to stably clone and sequence the Lactobacillus helveticus genome while no other vector system was successful."

- Dr. James Steele, Professor of Food Microbiology, University of Wisconsin, Madison

CloneSmart Blunt Cloning Kits contain the revolutionary pSMART[®] transcription-free vectors for perfect cloning of any DNA every time: no lost clones or rearranged sequences, no blue/white screening, and no problems.

More accurate results. The unique pSMART vectors (U.S. Pat. 6,709,861) eliminate the cloning bias inherent in other vectors. Even the most difficult genes or sequences are stable. With pSMART vectors, you don't worry about lost clones or altered sequences (Figures 1 & 2).

More recombinants with less work. pSMART vectors yield >99% recombinants. No blue/white colony screening is needed! With conventional vectors, up to 40% of the clones with inserts are discarded because they produce a blue color.

Ideal for all cloning applications

- **Difficult inserts.** pSMART vectors maintain unstable or toxic fragments.
- **Small to large inserts.** Clone DNAs from less than 100 bp up to 10-15 kb.
- **High fidelity shotgun libraries.** CloneSmart Kits give much more comprehensive libraries and minimize sequence gaps.
- **Easy subcloning and mutagenesis.** The small size of pSMART vectors allows simple and efficient subcloning, mutagenesis, and transposon insertion.

Maximum convenience. The power and simplicity of the CloneSmart system makes it ideal for all your cloning needs.

- Pre-processed vectors eliminate the need for digestion, gel purification, and dephosphorylation.
- High efficiency competent cells guarantee large, complex libraries.
- Cloning reagents are pre-mixed — just add your DNA.
- Ultra low background allows cloning of <10 ng for individual fragments, <500 ng for libraries.
- No post-ligation cleanup needed prior to transformation.
- pSMART vectors contain either ampicillin or kanamycin resistance, and high- or low-copy origins of replication.
- Compatible with all *E. coli* competent cells.

Clone even "unclonable" DNA

- Large Inserts
- Toxic genes
- AT-rich sequences
- Shotgun libraries
- cDNA
- PCR fragments
- Repeats & hairpins
- Trace amounts

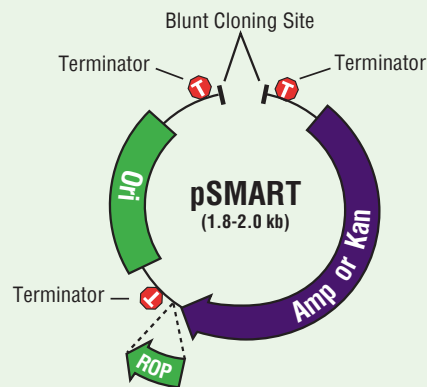


Figure 1. CloneSmart transcription terminators (T) prevent transcription into or out of the insert.

CloneSmart kits give you unbeatable results! Even the toughest DNA inserts are stable in pSMART vectors (see below).

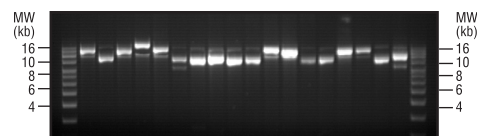


Figure 2. AT-rich *Bacillus cereus* large insert library in pSMART LCKan vector.

CloneSmart® DNA Cloning Kits

Choose the high copy pSMART-HC vectors for routine cloning, or the low copy pSMART-LC vectors for “difficult” sequences. The Kanamycin-resistant vectors are recommended for maximum insert stability. The ultra efficient *E. coli*® Competent Cells and Lucigen’s proprietary CloneSmart DNA Ligase in the Kits give much higher recombinant yields than ligation and transformation reagents from other suppliers.

CloneSmart Blunt Cloning Kits contain: Vector Premix, CloneSmart DNA Ligase, Positive Control Insert DNA, Sequencing Primers, YT Agar, and a complete protocol. ChimeraFree Cloning Kits also contain PyroPhage™ Tailing Enzyme and Buffer plus DNATerminator® End Repair Enzyme and Buffer. Kits with cells also include a choice of *E. coli* ELITE 10G or 10GF (≥ 2 x 10¹⁰ cfu/μg) or 10G SUPREME (≥ 4 x 10¹⁰ cfu/μg) Electrocompetent Cells, or 10G Chemically Competent Cells

(≥ 1 x 10⁸ cfu/μg), as indicated, packaged in one (SOLO) or two (DUO) transformations per tube, with Recovery Medium and Positive Transformation Control. Kits without cells can be used with any *E. coli* chemically competent or electrocompetent cells.

ORDER INFORMATION

Products	Cells Provided w/Kit	Size	Cat. No.	Price
Kanamycin-Resistant Vector Kits				
CloneSmart HCKan Blunt Cloning Kit	with 10G ELITE Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40708-1 40708-2	\$213 \$372
	with 10G ELITE Electrocompetent cells (DUOs)	10 rxns 20 rxns	40706-1 40706-2	\$201 \$351
	with 10G SUPREME Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40719-1 40719-2	\$281 \$498
	with 10G SUPREME Electrocompetent cells (DUOs)	10 rxns 20 rxns	40717-1 40717-2	\$265 \$482
	with 10G Chemically Competent cells (SOLOs)	10 rxns 20 rxns	40730-1 40730-2	\$172 \$301
	with 10G Chemically Competent cells (DUOs)	10 rxns 20 rxns	40728-1 40728-2	\$162 \$284
	without cells	20 rxns 40 rxns	40704-2 40704-4	\$198 \$353
CloneSmart LCKan Blunt Cloning Kit	with 10G ELITE Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40834-1 40834-2	\$230 \$404
	with 10G ELITE Electrocompetent cells (DUOs)	10 rxns 20 rxns	40832-1 40832-2	\$217 \$382
	with 10G SUPREME Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40845-1 40845-2	\$298 \$540
	with 10G SUPREME Electrocompetent cells (DUOs)	10 rxns 20 rxns	40843-1 40843-2	\$281 \$509
	with 10G Chemically Competent cells (SOLOs)	10 rxns 20 rxns	40856-1 40856-2	\$187 \$332
	with 10G Chemically Competent cells (DUOs)	10 rxns 20 rxns	40854-1 40854-2	\$177 \$313
	without cells	20 rxns 40 rxns	40821-2 40821-4	\$235 \$417
Ampicillin-Resistant Vector Kits				
CloneSmart HCamp Blunt Cloning Kit	with 10G ELITE Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40054-1 40054-2	\$213 \$372
	with 10G ELITE Electrocompetent cells (DUOs)	10 rxns 20 rxns	40052-1 40052-2	\$201 \$351
	with 10G SUPREME Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40065-1 40065-2	\$281 \$498
	with 10G SUPREME Electrocompetent cells (DUOs)	10 rxns 20 rxns	40063-1 40063-2	\$26 \$482
	with 10G Chemically Competent cells (SOLOs)	10 rxns 20 rxns	40076-1 40076-2	\$172 \$301
	with 10G Chemically Competent cells (DUOs)	10 rxns 20 rxns	40074-1 40074-2	\$162 \$284
	without cells	20 rxns 40 rxns	40041-2 40041-4	\$198 \$353
CloneSmart LCamp Blunt Cloning Kit	with 10G ELITE Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40313-1 40313-2	\$230 \$404
	with 10G ELITE Electrocompetent cells (DUOs)	10 rxns 20 rxns	40311-1 40311-2	\$217 \$382
	with 10G SUPREME Electrocompetent cells (SOLOs)	10 rxns 20 rxns	40324-1 40324-2	\$298 \$540
	with 10G SUPREME Electrocompetent cells (DUOs)	10 rxns 20 rxns	40322-1 40322-2	\$281 \$498
	with 10G Chemically Competent cells (SOLOs)	10 rxns 20 rxns	40335-1 40335-2	\$187 \$332
	with 10G Chemically Competent cells (DUOs)	10 rxns 20 rxns	40333-1 40333-2	\$177 \$313
	without cells	20 rxns 40 rxns	40300-2 40300-4	\$235 \$417



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