

**Lucigen**<sup>®</sup>  
Simplifying Genomics

**Simplify your research**

Try Lucigen today

lucigen.com

- ▶ Enzymes for NexGen Applications
- ▶ PCR & Amplification
- ▶ Cloning Kits & Vectors
- ▶ Competent Cells
- ▶ Protein Expression Kits

*Available in Canada from...*

MJS  
**BioLynx**  
INC.

1-888-593-5969 • [www.biolynx.ca](http://www.biolynx.ca) • [tech@biolynx.ca](mailto:tech@biolynx.ca)



## DNA Polymerases

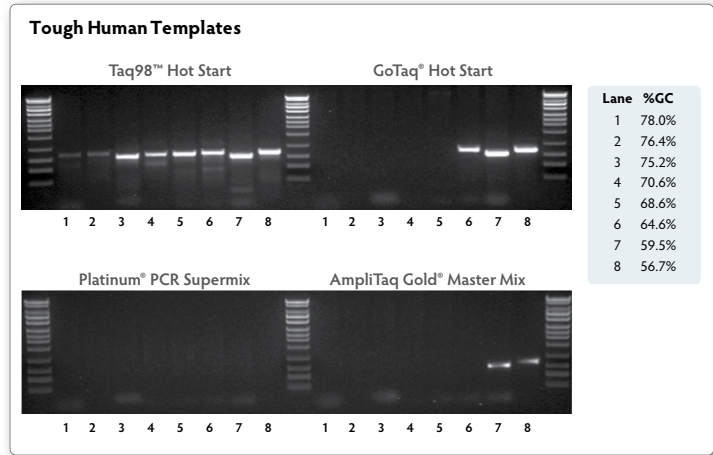
The ideal combination of Performance, Convenience, and Value

Our polymerases represent a superb option for all your amplification needs. With excellent robustness and great value, your lab can reduce costs without sacrificing performance.



### NEW Taq98™ Hot Start 2X Master Mix

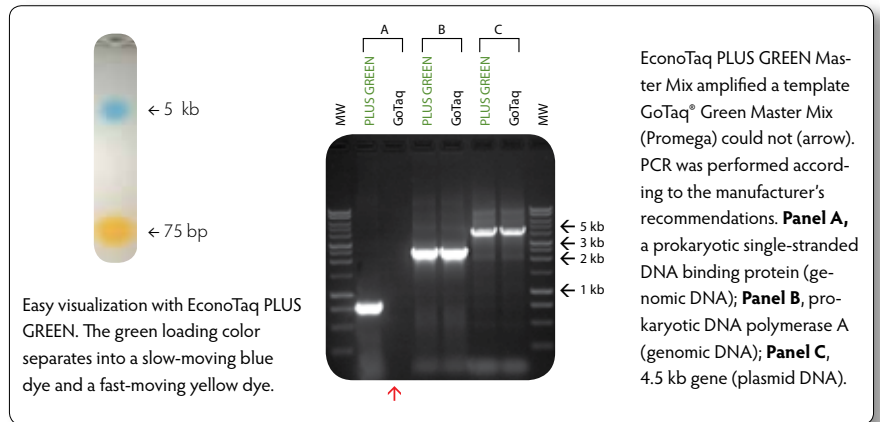
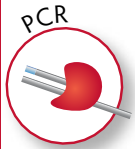
- Amplify the most challenging GC-rich templates >70%
- Supreme ease of use – just add your primers and template & go
- Extreme Thermostability - 98°C hot start step ensures denaturation of challenging sequences



### EconoTaq® PLUS and PLUS GREEN 2X Master Mixes

- Outstanding performance and value for your every day PCR applications
- Complete 2X Master mix with PCR enhancer for robust amplification
- EconoTaq PLUS Green includes loading and tracking dyes

Also available:  
EconoTaq DNA polymerase with separate buffers for greater flexibility

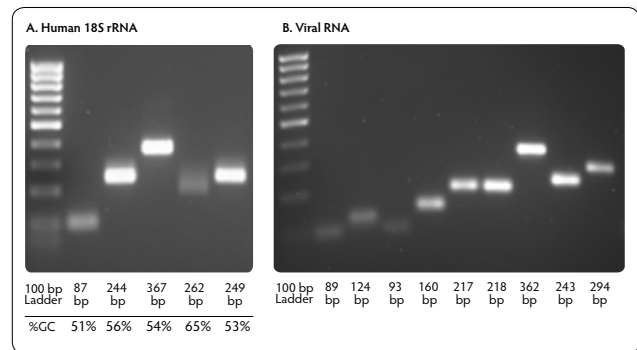


### PyroScript® RT-PCR 2X Master Mix

- Fast, single-tube RT-PCR: amplify RNA in <30 minutes
- Exceptional thermostability: reverse transcription at >70°C

#### Also available:

- EconoTaq® DNA Polymerase
- PyroPhage® 3173 DNA Polymerase (Exo-)
- Bst DNA polymerase
- PyroPhage 3173 Wild type
- NxGen™ Phi29 DNA polymerase
- NxGen M-MuLV Reverse Transcriptase
- dNTP's and more!



#### Single Enzyme RT-PCR

**A.** Human 18S rRNA sequences were amplified from 100 pg total A549 cell line RNA. Five primer sets targeting amplicons of between 51 and 65% GC content and 87 to 367 bp in length were tested. **B.** Viral RNA (Enterobacteriophage MS2) was amplified by 40 cycles of RT-PCR without background. Products from 89 to 362 bp in length were amplified. One-step single-enzyme RT-PCR cycle conditions: 15 sec @ 94°C (10s @ 94°C, 30s @ 72°C)\*40.



## Cloning Systems

Clone virtually any size of insert – from routine sequences to “unclonable” DNA!

Lucigen’s novel, transcription-free vectors reduce cloning bias, improve efficiency, and increase stability for your most demanding cloning applications.

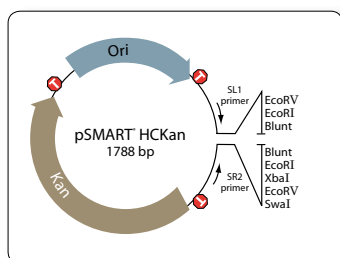


### CloneSmart® Cloning Kits

- Pre-processed pSMART® vectors for the ultimate ease of use
- Transcription-free design stabilizes toxic inserts
- Ultra-low background – no need for screening your clones

Available with:

- Electrocompetent or Chemically competent cells
- Kanamycin or Ampicillin antibiotic resistance
- High or Low Copy number

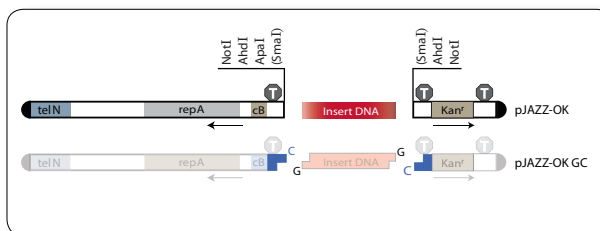


### BigEasy® Cloning Kits

- Efficiently clone any insert up to 30kb into unique pJAZZ® vectors
- Maximum insert stability
- Create libraries from ultra-high A/T or G/C-rich genomes
- Clone entire gene clusters or operons

Available with:

- Blunt, NotI, or PCR product cloning formats
- Kanamycin or Chloramphenicol antibiotic resistance



### CopyRight® v2.0 Fosmid & BAC Cloning Kits

- Reliably clone up to 200kb inserts – capture entire gene clusters
- High insert stability increases sequence coverage and reduces bias
- Inducible copy number

Available with:

- Fosmid (35–45kb insert) or BAC (up to 200kb insert) formats

### Also available:

- GC Cloning – the more efficient alternative to TOPO TA cloning kits
- DNATerminator and PCRTerminator End Repair Kits
- A full suite of enzymes to complete your cloning experiments



## Lucigen Custom Library Construction Services

### The recognized leader in random-shear BAC libraries!

- Unbiased libraries, fewer gaps
- Ideal for *de novo* genome sequencing and metagenomic studies
- Bundled library construction and sequencing services available

**eLucidator™**  
Cloning Kits & Vectors  
INTERACTIVE SELECTION GUIDE ▶  
[lucigen.com/cloningguide](http://lucigen.com/cloningguide)



## Competent Cells

Choose your application – Cloning, Phage Display, or Protein Expression.

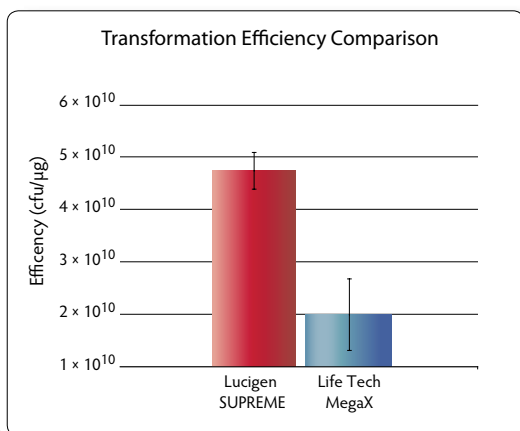


Lucigen's cells combine unparalleled transformation efficiencies and value in a range of strains and formats.

### Cells for Cloning

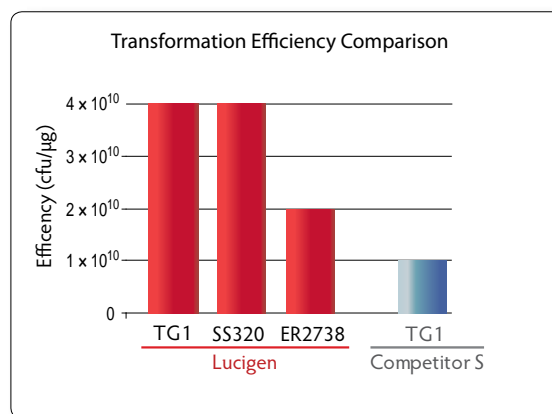
#### *E. coli*<sup>®</sup> Competent Cells for Cloning

- Transformation efficiencies up to  $\geq 4 \times 10^{10}$  cfu/ $\mu$ g (SUPREMES)
- Chemically competent or electrocompetent formats
- Replace your expensive strains with improved quality



#### Phage Display Competent Cells

- Perfect for antibody or peptide phage display libraries
- Highest transformation efficiencies available anywhere
- TG1, SS320, and E2738 strains – your only source for all three
- Amber suppressor and non-amber suppressor lines for maximum flexibility
- Create larger libraries and speed your discovery



### Cells for Protein Expression

#### *E. coli*<sup>®</sup> EXPRESS BL21(DE3)

- Great for any *E. coli* T7 expression vector
- Chemical and electrocompetent strains available with efficiencies  $\geq 5 \times 10^9$
- pLysS and pLysE strains available

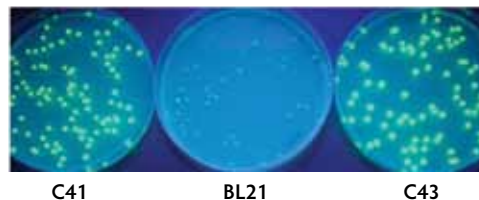
#### OverExpress<sup>™</sup> C41(DE3) and C43(DE3)

- Effective in expressing toxic and membrane proteins from any organism in a T7 vector
- Chemical and electrocompetent strains available with transformation efficiencies  $\geq 1 \times 10^{10}$
- Over 350 publications attest to OverExpress performance
- Also available in pLysS strain

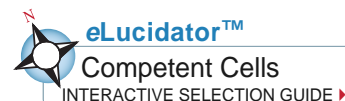
## Custom Competent Cells

### Save time and money

- We can make your specific strain efficiently and consistently
- Any of our strains are available in custom volumes – less waste, higher throughput for your large scale experiments



**Expression of toxic protein.** Green Fluorescent Protein was expressed from a T7 promoter construct in C41, BL21, or C43 competent cells.



[lucigen.com/compcellguide](http://lucigen.com/compcellguide)



## NEW Expressioneering™ Technology Your path to surprisingly simple protein expression!

- Enzyme-free directional PCR cloning in seconds
- Save days of effort with ready-to-use vectors and cells – no ligation steps
- Bacterial and Mammalian Expression systems available

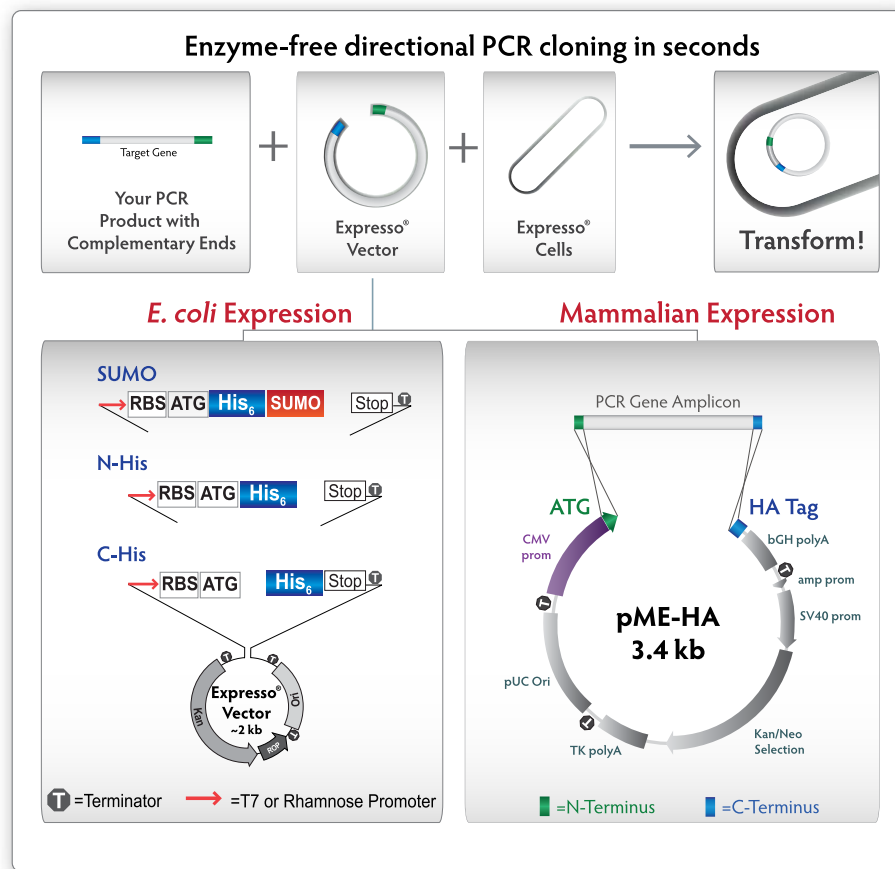
### *E. coli* Expression

- Your choice of T7 or Rhamnose Promoter
- Tightly controlled expression
- N- or C-terminal 6X His-tagged proteins
- Enhanced solubility with cleavable SUMO tag

### Mammalian Expression

- CMV promoter for robust expression in multiple cell lines
- Smallest mammalian expression vector available
- HA tag for easy protein purification & immuno detection

## Expressioneering™ Technology



## Interested in Expressioneering?

Order the Expresso® T7, Rhamnose, or CMV Cloning and Expression Kits today!

Watch how it works →

YouTube™



View the Expressioneering Technology video at:  
[lucigen.com/expressovideo](http://lucigen.com/expressovideo)

Enzymes



## NxGen™ Genomic Grade Enzymes

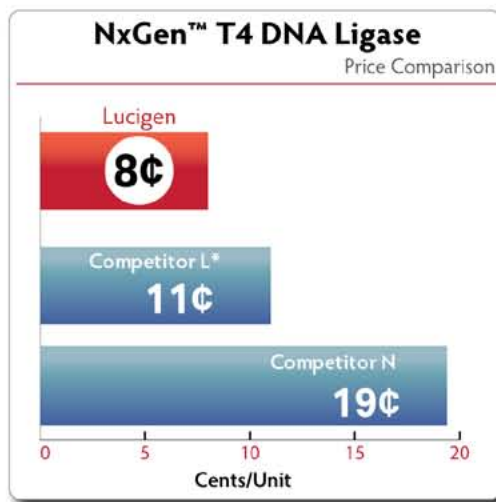
Exceptional performance for demanding applications

- High sensitivity for DNA/RNA sequencing & array analysis
- 99% purity for consistency and reliability
- Industry-leading value and quality

QUALITY & PRICE

## Advantage

Actual example of the savings you can expect.



\*Converted into equivalent units.

### Including:

- T4 DNA Ligase
- Phi29 DNA Polymerase
- M-MuLV Reverse Transcriptase
- And many more!



Modifying Enzymes  
SELECTION GUIDE ▶

[lucigen.com/enzymesguide](http://lucigen.com/enzymesguide)

**Lucigen®**  
Simplifying Genomics



At Lucigen, we deliver advanced molecular biology products and services to life scientists by inventing solutions to the most difficult problems in DNA cloning, amplification, and protein expression.

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