



# TransforMax™ EC100™ Chemically Competent *E. coli* Beat the Competition in Transformation Efficiency

In side-by-side comparisons with competent cells from the leading supplier, EPICENTRE's new TransforMax™ EC100™ Chemically Competent *E. coli* cells gave better transformation efficiencies for all DNA sizes tested, even if the DNA was directly from a ligation reaction (Table 1). Thus, TransforMax EC100 Chemically Competent cells and the previously-available TransforMax™ EC100™ Electrocompetent *E. coli* are best choices of competent cells for most cloning applications, including PCR cloning and cDNA library construction.

## Important Phenotypes

- Supports blue/white screening of vectors.
- Restriction minus for efficient cloning of methylated DNA.
- Endonuclease minus (*endA1*) to ensure high yields of DNA.
- *RecA* minus for insert stability.

## Single-Use Format...Perform Transformations Directly in the Tubes

TransforMax EC100 Chemically Competent *E. coli* cells are supplied in 50- $\mu$ l aliquots so you use only the number of tubes that you need. Just add your DNA directly to the tube in which the cells are provided. This eliminates extra pipetting steps and results in more consistent transformation results.

## Perform 5-Minute Transformations of TransforMax™ EC100™ Chemically Competent *E. coli*

Two transformation protocols are provided with the cells...the standard "heat-shock" procedure and a new 5-minute transformation procedure (Table 2). The 5-minute procedure does not require a "heat-shock" step or outgrowth of cells following transformation. The 5-minute

DNA	TransforMax™ EC100™ Chemically Competent <i>E. coli</i>	Leading Competitor
pUC19	1.4 X 10 <sup>8</sup>	2.2 x 10 <sup>7</sup>
8.1-kb Clone	1.3 X 10 <sup>7</sup>	7.4 X 10 <sup>6</sup>
13.1-kb Clone	4.3 X 10 <sup>6</sup>	4.1 X 10 <sup>6</sup>
23.1-kb Clone	9.2 X 10 <sup>5</sup>	4.5 X 10 <sup>5</sup>
13.1-kb Clone direct from a ligation reaction	2.2 X 10 <sup>5</sup>	1 X 10 <sup>5</sup>

**Table 1. Comparison of the transformation efficiencies of TransforMax™ EC100™ Chemically Competent *E. coli* with comparable cells from a leading competitor.** Transformations were performed using purified supercoiled DNAs of the indicated sizes and a 1- $\mu$ l aliquot from a standard 10- $\mu$ l ligation reaction. Transformations were performed by the standard "heat-shock" procedure. Results shown are the average transformation efficiencies obtained from several trials. All values are in cfu/ $\mu$ g DNA.

	5-Minute Transformation	Standard "Heat-Shock" Transformation
pUC19 DNA	8.5 X 10 <sup>6</sup>	1.4 X 10 <sup>8</sup>

**Table 2. Transformations can be performed in just 5 minutes using the TransforMax™ EC100™ Chemically Competent *E. coli* and clones containing an ampicillin resistance marker.** The 5-minute transformation procedure and the standard heat-shock procedure are both supplied with the cells. All values are in cfu/ $\mu$ g DNA.

transformation procedure can be performed using any clones where an ampicillin resistance marker is used for selection.

## Genotype

F<sup>-</sup> *mcrA*  $\Delta$ (*mrr-hsdRMS-mcrBC*)  $\phi$ 80*dlacZ* $\Delta$ M15  $\Delta$ *lacX74* *recA1* *endA1* *araD139*  $\Delta$ (*ara, leu*)7697 *galU* *galK*  $\lambda$ -*rpsL* *nupGX*

## The Best Value in Chemically Competent Cells

Compare our transformation efficiency. You'll find that TransforMax EC100 Chemically Competent *E. coli* are the best value.

[www.epicentre.com/ec100.asp](http://www.epicentre.com/ec100.asp)

TransforMax™ EC100™  
Chemically Competent *E. coli*  
CC02810 10 X 50  $\mu$ l

TransforMax™ EC100™  
Electrocompetent *E. coli*  
EC10005 5 X 100  $\mu$ l  
EC10010 10 X 100  $\mu$ l  
Transformation efficiency >5 X 10<sup>9</sup> cfu/ $\mu$ g.