

# AD&D Biotech Product Information Sheet

## ADD5 $\alpha$ <sup>TM</sup>

### Chemically Competent *E. coli* Cells

**Catalog number:** 170043, 170045, 170047

**Components:** 10x50 $\mu$ l (170043), 5x200  $\mu$ l cells (170045) or 20x50 $\mu$ l cells (170049), 10 $\mu$ l pUC18 (0.1ng/ $\mu$ l), 10ml SOC

**Efficiency:**  $\geq 1.0 \times 10^9$  CPU (colony per  $\mu$ g pUC18)

**Tube color:** natural with yellow cap

**Lot number:** on box

**Certified by:**

**Shelf life:** 6 months from receipt date

**Test conditions:** transformations are performed with 50 or 100  $\mu$ l aliquots of cells and 2  $\mu$ l of pUC18 control plasmid (10 pg/ $\mu$ l) and without pUC18 following the protocol below with 1hour incubation at 37°C shaker. Dilute the reaction 1:100 with RT SOC and 100  $\mu$ l of the dilution is plated in duplicate on LB agar plates with 50  $\mu$ g/ml ampicillin. The plates are incubated at 37°C overnight and the efficiency is calculated based on the average number of colonies per plate.

**Shipping conditions:** on dry ice.

**Storage conditions:** immediately upon receiving at the bottom of a -80°C freezer.

### Transformation Protocol

1. Thaw competent cells on ice. It is essential that cells be completely thawed before pipetting. Pipet slowly. For a more detailed protocol, please visit [www.addbiotech.com](http://www.addbiotech.com).
2. Transfer 50 or 100  $\mu$ l cells to a prechilled Falcon 352059 tube, add DNA of your choice (pure DNA or ligation mix) to the cells and incubate on ice for 30 minutes (may use 5 min for subcloning). Heat-shock at 42°C for 30 seconds and put the tube on ice for 2 minutes.
3. Add 900  $\mu$ l SOC or 950  $\mu$ l SOC if using 50  $\mu$ l cells and shake the cells at 37°C at 225 rpm for 30-60 minutes.
4. Plate out desired amount on a prewarmed (37°C) plate with the appropriate antibiotic and incubate in a 37°C incubator.

### About ADD5 $\alpha$ <sup>TM</sup> cells

They are appropriate for cDNA library construction and routine subcloning. Cells provide  $\alpha$ -complementation of the  $\beta$ -galactosidase gene for color selection and carry recA1 and endA1 makers, which

minimizes recombination and enhance plasmid quality. Its genotype is endA1 recA1 relA1 gyrA96 hsdR17( $r_k^-$ ,  $m_k^+$ ) phoA supE44 thi-1  $\Delta$ (lacZYA-argF)U169  $\Phi$ 80  $\Delta$ (lacZ)M15 F'. Comparable to DH5 $\alpha$ , a trademark of LTI.

### 5 min Transformation Protocol

1. Thaw competent cells on ice.
2. Transfer 50 or 100  $\mu$ l cells to a prechilled microcentrifuge tube or Falcon 352059 tube, add DNA of your choice (pure DNA or ligation mix) to the cells and incubate on ice for 5 minutes.
3. Plate out desired amount on a prewarmed (37°C) plate with the appropriate antibiotic and incubate in a 37°C incubator.

The transformation efficiency of the quick protocol is lower than that of the regular protocol but should be sufficient for subcloning.

### Related Products:

Cat #: 30015M, Fastgrow<sup>TM</sup> plate mix, for 500ml volume, sufficient to make 18-20 plates (100mm x 15mm). It can accelerate *E. coli* growth by 2-4 hr to pickable size on plate, depending on strains.

Cat #: 30025M, Fastgrow<sup>TM</sup> liquid mix, for 500ml. It can accelerate *E. coli* growth in liquid.

Cat#: 170017, Fastgrow<sup>TM</sup>  $\geq 1 \times 10^9$  chemically competent *E. coli* cells.

Cat#: 170067, Bac-King<sup>TM</sup>  $\geq 1 \times 10^{10}$  chemically competent *E. coli* cells.

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