

AD&D Biotech Product Information Sheet

Fastgrow™ Chemically Competent *E. coli* Cells

Catalog number: 170013, 170015, 170017

Components: 10x50 µl (170013), 5x200 µl cells (170015) or 20x 50 µl cells (170017), 10 µl pUC18 (0.1ng/µl), 10 ml SOC

Efficiency: ≥1.0 x 10⁹ CPU (colony per µg pUC18)

Tube color: natural with purple cap

Lot number: on box

Certified by:

Shelf life: 6 months from receipt date

Test conditions: transformations are performed with 50 or 100 µl aliquots of cells and 2 µl of pUC18 control plasmid (10 pg/µl) and without pUC18 following the protocol below with 1hour incubation at 37°C shaker. Dilute the reaction 1:100 with RT SOC and 100 µl of the dilution is plated in duplicate on LB agar plates with 50 µg/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.
2. Transfer 50 or 100 µl 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 1.5-2 minutes.
3. Add 900 µl SOC or 950 µl SOC if using 50 µl 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 Fastgrow™ cells

Fastgrow™ cell is specifically selected for its fast growth property. Unlike some other commercial *E. coli* strains, which take at least 14 hrs for the colonies big enough for picking, AD&D's Fastgrow™ can

grow to pickable colonies on plates with AD&D's special formulae within 7 hours. It can grow to pickable colonies on LB plates within 9 hours. With AD&D's Fastgrow™, you can transform in the morning and pick colonies before you go home around 5 PM. For other commercial *E. coli* strains, the colonies are not big enough for picking until late evening or the next morning. But the problem is, if you pick the colonies in the morning, the cells are not ready for miniprep until late in the afternoon. So it is obvious that you can speed up your research with AD&D's Fastgrow™ without any extra efforts. You can slow down cell growth by incubating plates at room temperature.

Fastgrow™ cells provide α -complementation of the β -galactosidase gene for color selection, may be used for producing single-stranded DNA from M13 or phagemid and may also be used for inducible protein expression of those genes under LacUV5 promoter control. Its genotype is F' proA⁺B⁺ lacI^qΔ(lacZ)M15/Δ(lac-proAB) glnV thi-1 Δ(hsdS-mcrB)5.

5 min Transformation Protocol

1. Thaw competent cells on ice.
2. Transfer 50 or 100 µl 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™ 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™ liquid mix, for 500ml. It can accelerate *E. coli* growth in liquid.

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