

Fast-Trans™ Competent *E.coli* DH5α cells

Cat # : PT-FTDH5-6 Size : 90 reactions
 PT-FTDH5 Size: 15 reactions
 SA-FTDH5 Size : 2 reactions

Date: 2014.04

Version: 14-01

Product Description:

The Fast-Trans™ competent cells are designed for high efficiency *E.coli* transformation in single-use aliquots. The *E.coli* strain is DH5α with efficiency greater than 10^8 cfu/μg no matter use general or fast procedure, which is suitable for routine blue/white screening of recombinants .

Components:

- Competent cells (100μL per tube) (Store at -80°C)
- pUC19 DNA (100pg/μL) (Store at -20°C or -80°C)
- SOC medium (Store at 4°C or -20°C)

Genotype : F Φ 80 lacZΔM15 Δ(lacZYA-argF) U169 endA1 recA1 hsdR17 (r_{c} , m_{c}) phoA supE44 thi-1 gyrA96 relA1

[General Protocol]

Before Starting:

- a. Turn on the water bath and set at 42°C.
- b. Warm the SOC medium to room temperature.
- c. LB plates containing 50 μg/ml ampicillin or kanamycin , 0.1 mM IPTG and 40 μg/ml X-gal (or spreading 50 μl of 50 mg/ml X-gal and 100 ul of 100 mM IPTG onto LB/antibiotic plates, incubate at 37°C for at least 30 min before plating the cells).

1. Thaw one tube of competent cells on ice for each transformation.
2. Pipet 1 to 2 μl ligation mixture into the cells, mix by gently swirling the tip or by gently tapping the tube-**do not mix by pipetting.**
3. Incubate the tube on ice for 25-30 min.

Manufactured for and distributed by Protech Technology Enterprise Co.,Ltd

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4. Heat-shock the tube at 42°C for 45 sec. **Do not mix or shake.**
5. Place on ice for 2 min and add 900 µl SOC and incubate at 37°C with shaking 225 rpm for 45 min to 1h.
6. Spread 100 µl onto each plate, you may store the remaining cells at 4°C and plate cells the next day.
7. Incubate the plates at 37°C overnight

[Fast Protocol]

1. Pipet 1 to 2 µl ligation mixture into the cells, mix by gently swirling the tip or by gently tapping the tube-do not mix by pipetting
2. Incubate the tube on ice for 5 min.
3. Heat-shock the tube at 42°C for 45 sec. Do not mix or shake
4. **Place on ice for 2 min and add 900 µl SOC**
5. Spread 100 µl onto each plate.
6. Incubate the plates at 37°C overnight

[Calculation of transformation efficiency]

If you do not obtain the expected number of colonies, it is recommended that you test the efficiency of competent cells with the control pUC19.

1. Add 1 µl of pUC19 DNA (100 pg) into one tube of competent cells.
2. Follow the steps as above.
3. Plate the cells in 1:10 dilution, you should have efficiency (cfu/µg) larger than 10⁸. (i.e. 100µl cells + 900 µl SOC, and you should have about 1000 colonies).

Calculation formula:

$$\frac{\text{\# of colonies}}{100 \text{ pg transformed DNA}} \times \frac{10^6 \text{ pg}}{\mu\text{g}} \times \frac{\text{total transformation volume}}{\text{x } \mu\text{l cells plated}} = \text{cfu}/\mu\text{g}$$

Form & Storage:

Store at -80°C. This product is stable for 3 month from the date of shipment.

Research Use Only

Please do not hesitate to contact us while you have any questions.

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