FT-5α Competent Cells

Cat: C3700

Size: 10×100μL/20×100μL

Storage: Store at -70°C to avoid repeated freezing and thawing.

Product Parameters:

English name: FT-5α Competent cells

Genotype: *F-φ80 lac ZΔM15Δ (lacZYA-arg F) U169 deoR endA1 recA1 hsdR17(rk-,mk+) supE44λ-thi-1 gyrA96 relA1 phoA*

Strain Resistance: Resistant to tetracycline; Sensitive to ampicillin, kanamycin, and spectacular.

Introduction:

FT-5α is a competent cell compatible with rapid transformation and conventional transformation. Amp anti-plasmid can be rapidly transformed in 10min, Kan anti-plasmid can be rapidly transformed in 30min, and can also be used for routine cloning, blue and white spot screening experiments. pUC19 plasmid was used to detect the conversion efficiency>×10^9 cfu/μg DNA.

Protocols:

1. General conversion process

1) Take 100μL of the competent cells melted on ice, add the target DNA (plasmid or junction product), gently mix, and leave on ice for 30min.
2) Heat shock in a water bath at 42°C for 60s, quickly transfer to the ice bath, and let stand for 2min(do not shake the sample during the ice resting process).
3) 500μL sterile liquid medium(SOB or LB) without antibiotics was added to the centrifuge tube, mixed and resuscitated at 37°C at 200 rpm for 60min.
4) Appropriate volume of resuscitation solution was evenly coated on LB solid medium containing corresponding antibiotics, and the plate was placed upside down in an incubator at 37℃ for overnight culture.

2. Rapid conversion process

A. Amp anti-plasmid

1) Take 100μL of the competent cells melted on ice, add the target DNA(plasmid or junction product), mix gently, and leave on ice for 5min.
2) The cells were heated in a water bath at 42℃ for 60s, then quickly transferred to the ice bath and left for 2min(do not shake the sample during the ice resting process).
3) 500μL sterile liquid medium(SOB or LB) without antibiotics was added to the centrifuging tube, and appropriate volume of resuscitating solution was evenly coated on solid medium containing Amp antibiotics, or directly coated without liquid medium. The incubator was cultured upside down at 37°C overnight.

B. Kan anti-plasmid

1) Take 100μL of the competent cells melted on ice, add the target DNA(plasmid or junction product), mix gently, and leave on ice for 5min.
2) Heat shock in a water bath at 42°C for 60s, quickly transfer to the ice bath, and let stand for 2min(do not shake the sample during the ice resting process).
3) 500μL sterile liquid medium(SOB or LB) without antibiotics was added to the centrifuge tube, mixed and resuscitated at 200 rpm for 20min at 37°C(the conversion efficiency was increased by 3 to 5 times for every 5 min increase in resuscitation time).
4) Appropriate volume of resuscitation solution was evenly coated on solid medium containing Kan antibiotics, and the incubator was turned upside down at 37°C for overnight culture.

Notes:

1. The plasmid transformation of Kan resistance must contain recovery steps, so that after a certain amount of Kan resistance gene expression products are accumulated, bacteria can grow normally.
2. For linking products, such as large plasmid, long fragment, and multi-fragment plasmid construction, it is recommended to increase the recovery time or adopt the conventional transformation process in order to improve efficiency.
3. If the biochemical reagents produced by our company are not specially marked, they are basically non-aseptic packaging. If used in cell experiments, please pre-treat them well in advance.
4. Once the solution is prepared, please store it separately to avoid product failure caused by repeated freezing and thawing.
5. The product information is for reference only, if you have any questions, please call 400-968-6088 for consultation.
6. This product is for scientific research only. Do not use for medicine, clinical diagnosis or therapy, food or cosmetics. Do not store in ordinary residential areas.
7. For your safety and health, please wear a lab coat and wear disposable gloves and a mask.