Super competent Cell Preparation Kit

Product Code: 246912

Super Competent Cell Preparation Kit

Product Introduction

This kit is used for rapid preparation of high-transformation-efficiency*Escherichia coli*competent cells. The kit includes specialized bacterial culture medium and preparation reagents.

The competent cell preparation process can be completed in up to 40 min. Verified transformation efficiency can reach 10^8–10^9cfu/μg plasmid.

Product Packing List

Product Code	Component	100T	200T
246912.1	*Escherichia coli*culture medium	150 mL	300 mL
246912.2	Preparation Reagent A	50 mL	100 mL
246912.3	Preparation Reagent B	1 mL	2 mL
246912.m	Instructions	1 copy	1 copy

Quality Standards and Safety Information

Raw Material or Packaging Name	Quality Standard	Main Toxicity
Bacterial culture medium	Sterile, enzyme-free	—
Reagent A	Sterile, enzyme-free	—
Reagent B	Sterile, enzyme-free	—

Shipping and Storage Conditions

Shipping	This product is shipped with ice packs.
Storage	Store Preparation Reagent A at -20°C and avoid repeated freezing and thawing. Store the bacterial culture medium and Preparation Reagent B at room temperature.

Instructions for Use

Perform all experiments below under aseptic conditions. Perform the second-step reaction on ice, and pre-cool the centrifuge to 4°C in advance.

I. Obtain a Monoclonal Bacterial Culture

1. Take 10 μL of preserved glycerol bacteria or another bacterial culture, add 1 mL bacterial culture medium, and incubate at 37°C and 220 rpm for 12 h.
2. Take an appropriate amount of the bacterial culture and spread it on a non-antibiotic LB plate. Incubate inverted at 37°C for 10 h.
3. Pick a single clone, add 1 mL bacterial culture medium, and incubate at 37°C and 220 rpm for 12 h to obtain the monoclonal bacterial culture.

II. Prepare Competent Cells

1. Take 100 μL of the bacterial culture prepared above and add it to 50 mL*E. coli* culture medium. Culture at 18°C and 220 rpm for 14 h, until OD_{600} is approximately 0.55.
2. Let the culture stand on ice for 10 min.
3. Transfer the culture to a centrifuge tube. Centrifuge at 4°C and 3500 rpm for 10 min to collect the bacterial cells. The centrifuge must be pre-cooled in advance.
4. Discard the supernatant. Add 16 mL ice-cold Preparation Reagent A to resuspend the cells. Centrifuge at 4°C and 3500 rpm for 10 min.
5. Discard the supernatant. Add 4 mL ice-cold, pre-cooled Preparation Reagent A to resuspend the cells. Add 300 μL Preparation Reagent B and mix gently.
6. On ice, aliquot the solution into sterile, nuclease-free EP tubes at 100 μL per tube.
7. Immediately place the tubes in liquid nitrogen for rapid freezing, then store at -80°C. Under normal conditions, transformation efficiency will not change significantly after 6 months.

Precautions

1. This kit is suitable for most *Escherichia coli* strains, such as DH5α, Top10, Trans1-T1, and BL21(DE3).
2. For safety and health, wear a lab coat and disposable gloves when operating.
3. This product is for research use only.