

Electrocompetent Cell Transformation

Introduction

This protocol prepares cells for electroporation and inserts assembled DNA into the cells.

Reagents

- 🔗 Electrocompetent cells
- 🔗 Assembly product
- 🔗 SOB media
- 🔗 LB/Kanamycin plates

Equipment

- 🔗 Electroporation cuvette
- 🔗 Electroporation machine
- 🔗 Pipette with tips
- 🔗 Incubator cabinet

Procedure

1. Transfer 50 μL of electrocompetent cells to a pre-chilled electroporation cuvette with a 1 mm gap.
2. Add 1 μL of the desired assembly product into the electroporation cuvette and mix gently by pipetting up and down.
3. Once DNA is added to the cells, electroporation can be carried out immediately; it is not necessary to incubate DNA with cells.
4. Add 950 μL of room-temperature SOB media to the cuvette immediately after electroporation.
5. Place the tube in an incubator cabinet at 37°C for 1 hour. Shake vigorously (250 rpm) or rotate.
6. Warm the LB/Kanamycin selection plates in the incubator cabinet and spread 100 μL of the electroporated cells onto the plates. Incubate overnight.