Electrocompetent BL21 Cell Transformation

Introduction

This protocol yields transformed electrocompetent cells.

Reagents

- BL21 electrocompetent cells
- Assembly product DNA
- SOB liquid media
- LB/Kanamycin plates

Equipment

- Electroporator
- Electroporation cuvette
- Eppendorf tubes
- Ice in a bucket
- Pipette and tips
- Incubation cabinet

Procedure

1. Thaw BL21 electrocompetent cells on ice. Place the electroporation cuvette on ice to chill.
2. Add 1 µL of the desired assembly production to 50 µL of electrocompetent cells in a sterile Eppendorf tube. Mix gently by pipetting up and down.
3. Transfer the contents of the Eppendorf tube to the chilled electroporation cuvette.
    a. *Cut a larger opening on a pipette tip so as to not damage the cells.*
4. Insert the electroporation cuvette into the electroporator and carry out the procedure at 1.8 kV.
5. Remove transformed cells, place in a second Eppendorf tube, and add 950 µL of SOB media.
6. Incubate the tube at 37°C for 60 minutes. Shake vigorously. Warm selection plates at 37°C.
7. Spread 100 µL of the transformed cells onto the plates and incubate overnight at 37°C.