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Gene to Protein Pvt. Ltd.

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BL21 (DE3) Competent Cells

Cat # CCELL-002
Pack Size: 10 vials
Storage: -80°C.
Avoid repeated freeze-thaw cycles.

Kit content:

S.No	Competent cell	Quantity
1	BL21 (DE3)	10 vial

Introduction

BL21 (DE3) Competent Cells are a highly efficient strain of *E. coli* that have been genetically modified to contain the T7 RNA polymerase gene under the control of the lacUV5 promoter. These cells are suitable for use in molecular biology applications, such as protein expression and purification.

Transformation protocol

1. Thaw one vial of BL21 (DE3) Competent Cells on ice.
2. Add 1-5 µL (10-100 ng) of DNA to the cells and gently mix by pipetting up and down.
3. Incubate the cells on ice for 10 minutes.
4. Heat shock the cells by incubating them at 42°C for 30-90 seconds, then immediately return them to ice for 10 minutes.
5. Add 800 µL of LB broth and incubate the cells at 37°C for 1 hour with shaking.
6. Centrifuge the cell at 3000 rpm for 3 min
7. Plate the cells onto selective agar plates and incubate overnight at 37°C.

Quality Control

Each lot of BL21 (DE3) Competent Cells is tested for transformation efficiency and cell viability. The minimum transformation efficiency is $1x10^4$ cfu/µg DNA.

Precautions

1. BL21 (DE3) Competent Cells are intended for research use only and are not intended for human or animal diagnostic or therapeutic use.
2. Follow good laboratory practices to avoid contamination.
3. Wear appropriate personal protective equipment, such as gloves and lab coats, when handling the cells.
4. BL21 (DE3) Competent Cells are highly sensitive to temperature changes and should be kept on ice or at -80°C until use.

Note: The cost associated with DH5α Competent Cells is solely for the production, testing, and shipment of the cells. No profit is made from the sale of this product. All proceeds are used to support the organization's mission of promoting scientific research and education.