

DATA SHEET

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1. Identification

Product name **BL21 (DE3) Competent Cells**
10 x 100µl
Cat. No **C0035**

2. Description

BL21(DE3) Competent Cells are chemically competent *Escherichia coli* cells used for protein expression of T7 RNA Polymerase-based systems. These cells are resistant to the lytic bacteriophages T1 and T5. The BL21 (DE3) strain is a derivative of *E. coli* B. It is deficient in both lon and ompT proteases resulting in superior isolation of intact recombinant proteins. The host is a lysogen of DE3 and, therefore, carries a chromosomal copy of the T7 RNA polymerase gene that is controlled by the lacUV5 promoter. The strain utilizes the T7 RNA promoter to control protein expression. IPTG is used to induce expression of the T7 RNA polymerase.

Genotype: F⁻ ompT gal dcm lon hsdSB(rB- mB-) λ(DE3 *lacI lacUV5-T7 gene 1 ind1 sam7 nin5).

3. Composition

Item	Quantity
Chemically Competent Cells	10 x 100µl
Control Plasmid	10 pg/µl

4. Quality Control

Each lot of competent cells is tested to verify transformation efficiencies using 100 pg pUC18 supercoiled DNA and the recommended protocol. Under these conditions, transformation efficiency will be ≥ 1x10⁷ cfu/µg pUC18.

Transformation efficiency is defined as the number of colonies forming units (cfu) which would be produced by transforming 1 µg of plasmid into a given volume of competent cells.

5. Handling and Storage specifications

- The BL21(DE3) Chemically Competent *Escherichia coli* cells are shipped on dry ice.
- Upon receipt, store cells immediately at **-80 °C**. Storage at -20 °C will result in a significant decrease in transformation efficiency.
- Convenient two reactions per vial packaging. Please note that competent cells are very sensitive to cycles of freezing and thawing and should not be exposed to temperature variations. For best results, thaw each vial of cells only once.

6. Further information

Product Use Limitations This product is developed, designed and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

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