BL21 (DE3) pLysS Chemically Competent Cell

Please read the manual carefully before use

Cat. No. CD701

Version No. Version 1.1

Storage: at -70℃ or below for one year. Do not store in liquid nitrogen.

Description

BL21(DE3) pLysS Chemically Competent Cell is specifically designed for chemical transformation of DNA. It is resistant to chloramphenicol(Cam^R) and permits a transformation efficiency of over 10^7 cfu/μg DNA (tested by pUC19 plasmid DNA).

Genotype

F^- *ompT hsdS*($r_B^-m_B^-$) *gal dcm*(DE3) pLysS Cam^r

Features

- Transformation efficiency: >10^7 cfu/μg (pUC19 DNA).
- Cam^R.
- Contains pLysS plasmid that expresses the T7 lysozyme gene to reduce the background of the target protein expression without disturbing IPTG functioning.
- Suitable for non-toxic and toxic protein's expression.
- Control plasmid III (Amp^+) is used for detection of expression function of cell. The protein size is about 25 kDa.

Procedures

- Equilibrate a water bath to 42℃.
- Warm a vial of SOC medium or LB medium to room temperature. Warm selective plates at 37℃ for 30 minutes.
- Thaw a vial of 100 μl of BL21(DE3) pLysS Chemically Competent Cell on ice, aliquot 50 μl of the cells into a prechilled 1.5 ml tube, add target DNA (1 to 5 μl) into the tube. Do not mix by pipetting up and down. Incubate the cells on ice for 30 minutes.
- Heat-shock the cells for 45 seconds at 42℃ without shaking. Immediately transfer the tube to ice. Incubate on ice for 2 minutes without shaking.
- Add 500 μl of prewarmed SOC medium or LB medium (without antibiotic) into the tube, mix well and shake at 37℃ for 1 hour at 200 rpm.
- Spread 20 to 200 μl from each transformation vial on a prewarmed selective plate. The remaining can be stored at 4℃ and plated the next day if needed.
- Invert the plate and incubate at 37℃ overnight.
- Select colonies and analyze by restriction enzyme digestion, PCR, or sequencing.

Notes

- Higher efficiency transformation can be achieved by transforming cells immediately following thawing.
- Avoid repeated thawing.
- Gentle handling is required for the entire procedure.

For research use only, not for clinical diagnosis.

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