

# TransB(DE3) Chemically Competent Cell

Cat. No. CD811

**Storage:** at -70°C for six months. Do not store in liquid nitrogen.

## Description

TransB(DE3) Chemically Competent Cell is specifically designed for chemical transformation of DNA. It is resistant to kanamycin (Kan<sup>R</sup>) and tetracycline (Tet<sup>R</sup>) and permits a transformation efficiency of over 10<sup>7</sup> cfu/μg DNA (tested by pUC19 plasmid DNA).

## Genotype

F<sup>-</sup> *ompT hsdSB(r<sub>B</sub><sup>-</sup>m<sub>B</sub><sup>-</sup>) gal dcm lacY1 ahpC (DE3) gor522::Tn10 trxB (Kan<sup>R</sup>, Tet<sup>R</sup>)*

## Features

- Transformation efficiency: >10<sup>7</sup> cfu/μg (pUC19 DNA).
- Kan<sup>R</sup> and Tet<sup>R</sup>.
- Thioredoxin reductase (trxB) and glutathione reductase (gor) mutation greatly facilitates cytoplasmic disulfide bond formation.
- Control plasmid I (Amp<sup>r</sup>) is used for detection of expression function of cell. The protein size is about 25 kDa.

## Procedures

- Equilibrate a water bath to 42°C.
- Warm a vial of SOC medium or LB medium to room temperature. Warm selective plates at 37°C for 30 minutes.
- Thaw a vial of 100 μl of TransB(DE3) 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°C 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°C 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 2-8°C and plated the next day if needed.
- Invert the plate and incubate at 37°C 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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