**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^R^) and tetracycline (Tet^R^) and permits a transformation efficiency of over 10^7^ cfu/μg DNA (tested by pUC19 plasmid DNA).

**Genotype**  
F' *ompT* *hsdSB* (r~K^-^ m~K^-^) *gal dcm lacY1 ahpC* (DE3) gor522::Tn10 trxB (Kan^R^, Tet^R^)

**Features**  
- Transformation efficiency: >10^7^ cfu/μg (pUC19 DNA).  
- Kan^R^ and Tet^R^.  
- Thioredoxin reductase (trxB) and glutathione reductase (gor) mutation greatly facilitates cytoplasmic disulfide bond formation.  
- Control plasmid I (Amp') 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.