

# Trans10 Chemically Competent Cell

Cat. No. CD101

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

## Description

Trans10 Chemically Competent Cell is specifically designed for chemical transformation of DNA. It permits a transformation efficiency of over  $10^8$  cfu/ $\mu$ g DNA (tested by pUC19 plasmid DNA). The competent cell is resistant to streptomycin sulfate (Str<sup>R</sup>).

## Genotype

F<sup>-</sup> *mcrA*  $\Delta$ (*mrr-hsdRMS-mcrBC*)  $\phi$ 80 *lacZ* $\Delta$ M15 $\Delta$  *lacX74* *recA1* *ara* $\Delta$ 139 $\Delta$ (*ara-leu*)7697 *galU* *galK* *rpsL* (Str<sup>R</sup>) *endA1* *nupG*

## Features

- High transformation efficiency:  $>10^8$  cfu/ $\mu$ g ( pUC19 DNA).
- Str<sup>R</sup>.
- Blue/white selection.
- Toxic gene cloning and stable replication of plasmid DNA.

## 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  $\mu$ l of Trans10 Chemically Competent Cell on ice, aliquot 50  $\mu$ l of the cells into a prechilled 1.5 ml tube, add target DNA (1 to 5  $\mu$ l ) into the tube. Do not mix by pipetting up and down. Incubate the cells on ice for 30 minutes.
- Heat-shock the cells for 30 seconds at 42°C without shaking. Immediately transfer the tube to ice. Incubate on ice for 2 minutes without shaking.
- Add 500  $\mu$ l 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 for cell recovery and for the expression of antibiotic resistance.
- Spread 20 to 200  $\mu$ l from each transformation vial on a prewarmed selective plate. The remaining can be stored at 4°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.

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