*Trans*10 Chemically Competent Cell

Please read the manual carefully before use

Cat. No. CD101

Version No. Version 1.1

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

Description

*Trans*10 Chemically Competent Cell is specifically designed for chemical transformation of DNA. It permits a transformation efficiency of over 10^8 cfu/μg DNA (tested by pUC19 plasmid DNA). The competent cell is resistant to streptomycin sulfate (Str^R).

Genotype

F^- *mcr*A Δ(*mrr-hsd*RMS-*mcr*BC) φ80 *lac*ZΔM15Δ *lac*X74 *rec*A1 *ara*Δ139Δ(*ara-leu*)7697 *gal*U *gal*K *rps*L (*Str*^{R}) *end*A1 *nup*G

Features

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

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 *Trans*10 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 30 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 for cell recovery and for the expression of antibiotic resistance.
- Spread 20 to 200 μl from each transformation vial on a prewarmed selective plate. The remaining can be stored at 2-8℃ 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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