# *Trans*Stbl3 Chemically Competent Cell

Cat. No. CD521

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

## Description

*Trans*Stbl3 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).

## Genotype

F- *mcrB mrr hsdS*20($r_B^-$, $m_B^-$) *recA*13 *supE*44 *ara*-14 *galK*2 *lacY*1 *proA*2 *rpsL*20 *(*$Str^R$*)* *xyl*-5 *λ*- *leu mtl*-1

## Features

- Suitable for lentivirus and retrovirus vector plasmid vectors transformation.
- Reduced the frequency of homologous recombination of long terminal repeats.
- High transformation efficiency: >$10^8$ cfu/μg (pUC19 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 μl of *Trans*Stbl3 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 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 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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