

TOP10 Chemically Competent Cell

Product Specification

Catalog Number	Specification
CS02010	10×100μL
CS02020	20×100μL

Product introduction

The product are the competent cells obtained from special treatment of Escherichia coli TOP10 strain, and can be used for DNA thermal shock conversion. TOP10 is a kind of strain which can be commonly used in plasmid cloning, its 80lacZ M15 product can be complementary to the amino terminus of the beta galactosidase that encoded by the vector, and also can be used for blue-white spot screening.

Using pUC19 plasmid to detect, the conversion efficiency can up to 10^8 , which is suitable for efficient cloning of plasmid DNA and can ensure stable replication of high copy plasmid.

Protocol

1. Take the TOP10 chemically competent cells from $-80\text{ }^{\circ}\text{C}$, inserted rapidly in the ice, waiting for 5 minutes for the fungus block to melt, add the target DNA (plasmid or connection product) and then gently blowing it with pipette, place in the ice for 5 minutes.
2. Heat shock 90 seconds in $42\text{ }^{\circ}\text{C}$ water bath, quickly put back on ice and put it aside for 5 minutes.
3. Add 500 μL of antibiotic-free sterile medium (SOC or LB medium) to the centrifuge tube and mix for 37 minutes at $200\text{ }^{\circ}\text{C}$ for 60 minutes.
4. 3000 RPM instantaneous centrifugal harvesting bacteria, with a total of 100 μL left and to gently blow the resuspension bacteria and smear it to the LB medium containing the selected plasmid with screening antibiotics
5. Upside down the plate and place it in a incubator at $37\text{ }^{\circ}\text{C}$ over night.

Notes

1. It is better to slowly melt competent cells in the ice, not to place cells in the ice too long, long storage will reduce the conversion efficiency.
2. Gentle operation should be performed when mixing the plasmid.
3. Conversion of high concentration of plasmids can reduce the amount of bacteria that eventually to be used for plating.