

# DH5 $\alpha$ Chemically Competent Cell

## Product specification

Catalog Number	Specification
CS01010	10 $\times$ 100 $\mu$ L
CS01020	20 $\times$ 100 $\mu$ L

## Product introduction

When use pUC series vector to carry out DNA conversion in E.coli DH5 $\alpha$ , since the LacZ $\alpha$  polypeptide produced by the vector DNA was bound to lacZ $\Delta$ M15 encoded by DH5 $\alpha$ , thus showing  $\beta$ -galactosidase activity.(alpha- complementarity).Using this characteristic, the recombinant strain can be easily identified. DH5 alpha can be used to make gene bank and subcloning. Because DH5 alpha has decR variation, it can be used as the host bacteria of larger plasmid.

## Protocol

1. Take the DH5 $\alpha$  competent cells from - 80  $^{\circ}$ 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  $^{\circ}$ C water bath , quickly put back on ice and put it aside for 5 minutes.

3. Add 500  $\mu$ L of antibiotic-free sterile medium (SOC or LB medium) to the centrifuge tube and mix for 37 minutes at 200  $^{\circ}$ C for 60 minutes.

4. 3000 RPM instantaneous centrifugal harvesting bacteria, with a total of 100  $\mu$ L left and to gently blow the resuspension bacteria and smear it to the LB medium containing the selected plasmid with screening antibiotics

Upside down the plate and place it in a incubator at 37  $^{\circ}$ 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 will eventually be used for coating.