Product Detail

Made by BIOC3301 Student at Div of Bioscience, UCL

Product Name: Competent DH5α cells
Species: Escherchia coli
Strain: DH5α
Plasmid to be maintained: None
Volume: 80 x 0.1mL
Suspension medium: FB medium
Storage: -80°C
Best before date: 2017/04/21
Mean Transformation Efficiency: (8. ±3.5)x10^5cfu/(ug of pUC19, under optimal conditions)

Chromosomal genotype: F- Φ80lacZΔM15 Δ(lacZYA-argF) U169 recA1 endA1 hsdR17(rk-, mk+) phoA supE44 thi-1 gyrA96 relA1 λ-

Content of Suspension (FB) medium:
100 mM KCl
50 mM CaCl 2
10% glycerol
10 mM KAc pH 7.5

Quality Control:
1.Transformation efficiency:
was estimated with varied amoung of pUC19 following the mentioned protocol .

Amount of pUC19 (ng)	Number of Transformant (cfu)
1	<10
10	8230
100	>6000

Optimal pUC19 amount: 10ng

2.Sensitivity to Antibiotics: Unknown, supposedly sensitive to all antibiotics

3.Sensitivity to Φ80 phage: unknown

Description: This DH5α strain is grown and harvested from a vial of Library Efficiency® DH5α™ Competent Cells (Catalog No.: 18258012, Invitrogen). It is harvested at an OD_{550} of 0.535, and made competent by a 10-min incubation with FB medium on ice. The cells were immediately freezed with $LN_{2.}$

Additional Features:
1.Cloning experiments using limiting amounts of DNA
2.Blue/white screening on X-Gal or Bluo-Gal (φ80dlacZΔM15 marker)
3.Efficient transformation of large plasmids
4.Hosting of M13mp cloning vectors using a lawn of DH5α-FT TM, DH5αF' TM, DH5αF'IQ TM, JM101, or JM107 for plaque formation.

Quick Transformation protocol:
1. Thaw the cells on ice until last ice crystal dissappear.
2. Add 5uL of 2ng/µL(or as required) pUC19 to cells.
3. Incubate on ice for 30min.
4. Heat-bath the cells at 42°C for 45sec.
5. Chill the cells on ice for 1min30sec.
6. Add 200µL of S.O.C. to the cells.
7. Incubate and shake at 37°C for 60min.
8. Take 30µL and plate out the cells to an ampcillin-LB plate.
9. Take 270µL and plate out the cells to an ampcillin-LB plate.
10. Incubate overnight at 37°C