# Chemically Competent Cell

Catalogue No.:abx098066

Chemically Competent Cell is designed for chemical transformation of DNA, with a transformation efficiency of over $10^8$ cfu/μg DNA (tested by pUC19 plasmid DNA). It is suitable for blue/white selection, routine cloning, and is the lowest homologous recombination favourable for plasmid DNA preparation.

The genotype is: *end*A1 *rec*A1 *gyr*A96 *thi*-1 *hsd*R17 ($r_k^-$, $m_k^+$) *rel*A1 *sup*E44 D (*lac-pro*AB) [F'*tra*D36 *pro*AB *laq*I$^q$ZΔM15].

The 1 ml size consists of 10 × 100 μl Competent Cells, 20 μl (0.1 ng/μl) Control Plasmid pUC19, and 10 ml SOC Medium.

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| **Target:** | Chemically Competent Cell |
| **Storage:** | Store at -70 °C for up to 6 months. Do not store in liquid nitrogen. Avoid repeated freeze/thaw cycles. |
| **Note:** | THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.<br>This product is shipped with dry ice. |
| **Directions for use:** | **Recommended Protocol:**<br>1. Equilibrate a water bath to 42 °C. Bring a vial of SOC medium or LB medium to room temperature. Warm selective plates to 37 °C for 30 minutes.<br>2. Thaw 100 μl of Chemically Competent Cell on ice. Aliquot 50 μl of cells into a pre-chilled 1.5 ml tube, then add target DNA (1-5 μl). Do not mix by pipetting up and down. Leave on ice for 30 minutes.<br>3. Heat-shock the cells for 45 seconds at 42 °C, without shaking. Immediately transfer to the tube to ice. Leave on ice for 2 minutes without shaking.<br>4. Add 500 μl of prewarmed SOC medium or LB medium (without antibiotics) into the tube. Mix well and shake at 37 °C for 1 hour at 200 RPM for cell recovery and expression of antibiotic resistance.<br>5. Spread 20-200 μl from each transformation vial onto a pre-warmed selective plate. Cells that have not been plated can be stored at 4 °C and plated the next day if required.<br>6. Invert the plates and incubate at 37 °C overnight.<br>7. Select colonies and analyse by restriction enzyme digestion, PCR or sequencing.<br>**Note:**<br>Higher efficiency transformation can be achieved by transforming cells immediately following thawing. Avoid repeated thawing. All samples and reagents require gentle handling throughout the entire procedure. |




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