JM108 Competent Cells

Cat: C3750
Size: 10×100μL/20×100μL
Storage: Store at -70°C to avoid repeated freezing and thawing.

Product Parameters:
English name: JM108 Competent Cells

Genotype: F^-endA1 recA1 gyrA96 thi-1 relA1 glnV44 Δ(lac-proAB) hsdR17 (rK-mK +)

Strain Resistance:
Sensitive to ampicillin, kanamycin, spectacular, chloramphenicol, and tetracycline. Has nalidixic acid resistance.

Introduction:
JM108 is a strain of E. coli K12. Genetic marker gyrA96 indicated the mutation of DNA rotase(topoisomerase II), which promoted the conformational superhelix of plasmid DNA and greatly increased the proportion of superhelix plasmids in cells. endA1 deletion increased the yield and quality of plasmid DNA; Recombinase defect type (recA1) reduced the probability of homologous recombination of inserted fragments. Insertion of IS186 transposons results in defective lon protease expression. The JM108 strain is very suitable for recombinant plasmid construction and extraction of high quality superhelical conformation plasmids. The competent cells of JM108 were made by a special process, and the conversion efficiency of pUC19 plasmid was 1×10^8 cfu/μg DNA.

Protocols:
1. The competent cells are placed in an ice bath to defreeze. After the cells are just defreeze, plasmid DNA or 5-10μL of the connection product was added to the cells, dial the bottom of the tube with your finger, and gently mix;
2. Place in the ice bath for 30min, do not shake;
3. Heat shock at 42℃ for 60s, do not shake;
4. Place in the ice bath for 2min, do not shake;
5. Add 500μL sterile LB medium;
6. The culture was placed in a shaking table at 37℃, 150-200rpm for 60min.
7. Take 50-100μL bacterial solution and apply it on LB plate containing corresponding antibiotics. After the liquid was drained, the plate was turned upside down and cultured at 37℃ overnight.

(**Plate scribing separation method:** After the recovery culture, centrifuge at 12000rpm for 30s, discard the supernatant, leave about 100μL of liquid, gently blow the bacteria with 200μL suction head, take 10μL of suspended bacterial liquid divided into more drops on the plate, tilt the suction head, and use the side of the suction head to scribing the liquid dripping on the plate. This method can obtain a larger monoclonal colony. This method is mainly suitable for plasmid transformation,

and the conversion of link products is best by coating.)

(**Rapid plasmid transformation steps:** For ampicillin resistant plasmids, shorten the time of step 2 to 5min. After completing step 4, it can be directly coated or marked on the ampicillin resistant LB plate. Other resistant plasmids still require 60min of resuscitation.)

Notes:

1. If the biochemical reagents produced by our company are not specially marked, they are basically non-sterile packaging. If they are used in cell experiments, please pre-treat them in advance.
2. Once it is prepared into a solution, please pack it separately and store it to avoid product failure caused by repeated freezing and thawing.
3. The product information is for reference only, if you have any questions, please call 400-968-6088 for consultation.
4. This product is for scientific research only. Do not use for medicine, clinical diagnosis or therapy, food or cosmetics. Do not store in ordinary residential areas.
5. For your safety and health, please wear a lab coat and wear disposable gloves and a mask.