



Heat Shock Transformation

2017 Protocols

Purpose:

Purpose of this protocol is to introduce plasmid DNA into *E. coli* cells.

Required Materials:

- Heat block
- *E. coli*
- LB Broth
- Ice
- LB Agar+antibiotic plates

Procedure:

1. Thaw desired *E. coli* strain on ice for ~10 minutes.
2. Add 5 uL of ligated DNA or ~10 ng of miniprep plasmid DNA to 50 uL of *E. coli* cells. Incubate on ice for 20-30 minutes.
3. Incubate bacteria for 45 seconds at 42°C.
4. After heat shock, let rest on ice for 10 minutes.
5. Add 250 uL LB Broth to *E. coli* solution.
6. Incubate, shaking, at 37°C for 1 hour.
7. After 1 hour, plate bacteria onto LB Agar+antibiotic plates, spreading solution evenly.
8. Incubate for 18-24 hours at 37°C.