

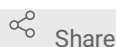



Sep 08, 2022

# High Efficiency Transformation

New England Biolabs<sup>1</sup><sup>1</sup>New England Biolabs

1 Works for me

[dx.doi.org/10.17504/protocols.io.14egn2bdzg5d/v1](https://dx.doi.org/10.17504/protocols.io.14egn2bdzg5d/v1) yuhanl

## ABSTRACT

Protocol for high efficiency heat shock transformation of competent *E. coli* cells.  
Source: New England Biolabs

## DOI

[dx.doi.org/10.17504/protocols.io.14egn2bdzg5d/v1](https://dx.doi.org/10.17504/protocols.io.14egn2bdzg5d/v1)

## PROTOCOL CITATION

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<https://protocols.io/view/high-efficiency-transformation-cf83tryn>



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Sep 06, 2022

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## PROTOCOL INTEGER ID

69627

## MATERIALS TEXT

SOC Outgrowth Medium - 100 ml (New England Biolabs Catalog #B9020S)

- 1 Thaw a tube of competent E. coli cells on ice for  **00:10:00** . Mix gently and carefully pipette  **50 µL** of cells into a transformation tube on ice. 10m
- 2 Add  **1 µL** containing  **100 ng** of plasmid DNA to the cell mixture. Carefully flick the tube 4-5 times to mix cells and DNA. Do not vortex.
- 3 Place the mixture on ice for  **00:30:00** . Do not mix. 30m
- 4 Heat shock at exactly  **42 °C** for exactly  **00:00:30** . Do not mix. 30s
- 5 Place on ice for  **00:05:00** . Do not mix. 5m
- 6 Pipette  **950 µL** of room temperature SOC into the mixture.
- 7 Place at  **37 °C** for  **01:00:00** . Shake vigorously (  **250 rpm** ) or rotate. 1h
- 8 Warm selection plates to  **37 °C** .
- 9 Mix the cells thoroughly by flicking the tube and inverting, then perform several 10-fold serial dilutions in SOC.
- 10 Spread 50-100 µl of each dilution onto a selection plate and incubate overnight at  **37 °C** . 1d  
Alternatively, incubate at  **30 °C** for  **24:00:00** or  **25 °C** for 48 hours.