



Jan 13, 2026

Transformation Protocol

DOI

<https://dx.doi.org/10.17504/protocols.io.5jyl8xpr6v2w/v1>

Tamra TCL Lahom¹

¹University of Pennsylvania



Tamra Mbeuh Lahom Lot

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.5jyl8xpr6v2w/v1>

Protocol Citation: Tamra TCL Lahom 2026. Transformation Protocol. **protocols.io**

<https://dx.doi.org/10.17504/protocols.io.5jyl8xpr6v2w/v1>

License: This is an open access protocol distributed under the terms of the **[Creative Commons Attribution License](#)**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: January 12, 2026



Last Modified: January 13, 2026

Protocol Integer ID: 238476

Keywords: transformation protocol quick ligation product, following protocol, protocol, new england biolab

Abstract

Quick Ligation products may be transformed by many different methods. The following protocol is recommended by New England Biolabs.

Safety warnings

❗ * Please note: For the duration and temperature of the heat shock step as well as for the media to be used during the recovery period, please follow the recommendations provided by the competent cells' manufacturer.

Before start

Make selection plates prior to starting this procedure.



Protocol

3h 0m 30s

- 1 Thaw competent cells on ice for 00:30:00 . 30m
- 2 Take the concentration of the plasmid sample. It was 10 mg/mL
- 3 Add 10 ng (2 μ L μ l) of the plasmid to 50 μ L of competent cells. Gently flick the tube 4–5 times to mix the cells and DNA. Do not vortex.
- 4 Chill approximately 5 ng (2 μ L μ l) of the plasmid in a 1.5 ml microcentrifuge tube.
- 5 Place the mixture on ice for 00:30:00 minutes. Do not mix. 30m
- 6 Heat shock at 42°C for 00:00:30 . Do not mix. 30s
- 7 Add 300 μ L μ l of room temperature LB media to the tube.
- 8 Place tube at 37 °C for 02:00:00 minutes. Shake at 250 rpm. 2h
- 9 Warm selection plates to 37 °C
- 10 Spread 150 μ L of the cells and ligation mixture onto the plates.
- 11 Incubate overnight at 37 °C .