

# T4 DNA Ligase Reaction

## New England Biolabs

### Abstract

This is the reaction for the "Ligation Protocol with T4 DNA Ligase"

**Citation:** New England Biolabs T4 DNA Ligase Reaction. **protocols.io**

dx.doi.org/10.17504/protocols.io.cf7trm

**Published:** 25 Jan 2015

## Protocol

### Step 1.

#### AMOUNT

2 µl Additional info:

#### REAGENTS

 T4 DNA Ligase - 20,000 units [M0202S](#) by [New England Biolabs](#)

### Step 2.

Vector DNA (4 kb) 50 ng (0.020 pmol)

#### AMOUNT

50 ng Additional info:

#### ANNOTATIONS

**Ben Claywell** 17 Jul 2015

Use NEBioCalculator to determine concentration

**Low Sin Yee** 23 Jul 2015

recommended vector concentration 50ng=0.05ug

my linearized vector concentration= 5ug/ml=0.005ug/ul

1ul vector=0.005ug

how many ul of vector to make up 0.05ug?

$(0.05\text{ug} \times 1\text{ul}) / 0.005\text{ug} = 10\text{ul}$

thus, 10ul of vector should be added into ligation reaction.

### Step 3.

Insert DNA (1 kb) 37.5 ng (0.060 pmol)

#### AMOUNT

38 ng Additional info:

#### ANNOTATIONS

**Ben Claywell** 17 Jul 2015

Use NEBioCalculator to determine concentration

### Step 4.

Nuclease-free water to 20 µl


## Step 5.

T4 DNA Ligase, 1 µl

### AMOUNT

1 µl Additional info:

### REAGENTS

 T4 DNA Ligase - 20,000 units [M0202S](#) by [New England Biolabs](#)

### ANNOTATIONS

**mehrdad alirezaei** 17 Jul 2015

T4 DNA Ligase - 100,000 units

Catalog #: [M0202M](#)