Element Biosciences

Quick Guide for the Adept™ Rapid PCR-Plus Protocol

# Element Adept Library Compatibility Workflow

## Introduction

This quick guide provides concise instructions for the Adept PCR-Plus Protocol, which uses the Adept Rapid PCR-Plus Kit. For comprehensive information and detailed instructions, see the *Element Adept Library Compatibility Workflow User Guide for the Rapid PCR-Plus Protocol (MA-00040)*.

## Amplify Library

1. Prepare 0.05–0.5 pmol linear library in 0.1 mM EDTA and 10 mM Tris, pH 8.0.
2. Combine the following reagents, allowing 10–15% overage.

| Reagent | Volume per Reaction (µl) |
|---|---|
| Adept PCR+ Primer Mix | 5 |
| Adept PCR+ Master Mix | 25 |

3. Add 20 µl library to a new PCR plate.
4. Add 30 µl master mix.
5. Run the following program:

| Temperature | Time | Number of Cycles |
|---|---|---|
| Volume set to 50 µl | | |
| Lid set to 105°C | | |
| 98°C | 1.5 minutes | 1 |
| 98°C | 30 seconds | 5 |
| 60°C | 30 seconds | |
| 72°C | 30 seconds | |
| 72°C | 1 minute | 1 |
| 4°C | Hold | 1 |

## Clean Up Library

1. Add 50 µl beads (1x).
2. Mix beads and library:
   - » For a plate, shake at 1500–1800 rpm for 2 minutes.
   - » For tubes, pipette 10 times.
3. Incubate at room temperature for 5 minutes.
4. Place on the magnet and wait until supernatant clears. ***Keep on the magnet.***
5. Remove the entire volume of supernatant.
6. Wash the content of each well or tube:
   a. Add 200 µl 80% ethanol and incubate 30–60 seconds.
   b. Remove and discard ethanol.
   c. Repeat steps a–b one time.
   d. Remove residual ethanol.
7. Air-dry for 3–5 minutes.
8. Add 32 µl low TE buffer (10 mM Tris, pH 8.0 and 0.1 mM EDTA).
9. Resuspend the beads:
   - » For a plate, shake at 1500–1800 rpm for 2 minutes.
   - » For tubes, pipette 10 times.
10. Incubate at room temperature for 2 minutes.
11. Place on the magnet and wait until supernatant clears.
12. Transfer 30 µl ***supernatant*** to a DNA LoBind tube.
13. Proceed to *Quantify Library* and sequencing or store at -25°C to -15°C for ≤ 15 days.

## Quantify Library

1. Quantify 2 µl library using Qubit.
2. Size 2 µl library using TapeStation.
3. Calculate the molar concentration:

$$nM = (ng/\mu l)/(660 * average\ library\ size) * 1{,}000{,}000$$