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# Background control of Gotcha RCA

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This protocol aims to verify that GotCha design works as expected.

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### Preparation

- 1 Add  $\Box 5 \mu L$  of functional beads(Gotcha) into eppendorf
- 2 Centrifuge for **315000 rpm, 00:05:00** and remove supernatant. Make sure that eppendorf should put on DynaMag when removing supernatant.

Protocol of Control group without miRNA



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- 3 Add 

  3 μL of 10X phi29 polymerase reaction buffer into eppendorf with functional beads
- 4 Add **⊒23.4** µL RNase-free water
- 5 Add  $\square 3 \mu L$  of 2mM dNTPs
- 6 Add  $\blacksquare$ 0.6  $\mu$ L of 10U/ul phi29 polymerase
- 7 Pipetting to mix well
- 8 Incubate for © 02:00:00 at & Room temperature
- 9 Add **□1.5** µL of 20X evagreen dye
- 10 Add  $\blacksquare$ 1.5  $\mu$ L of 0.5M EDTA buffer to suspend the reaction

Protocol of Control group without phi29 polymerase

11 Add  $\blacksquare 3 \, \mu L$  of 10X phi29 polymerase reaction buffer into eppendorf with functional beads

2h

12 Add **□21 µL** RNase-free water

- 13 Add □3 µL of 2mM dNTPs
- 14 Add **□3 µL** of 100nM miRNA
- 15 Pipetting to mix well
- 16 Add  $\blacksquare$ 1.5  $\mu$ L of 20X evagreen dye
- 17 Add  $\blacksquare$ 1.5  $\mu$ L of 0.5M EDTA buffer to suspend the reaction

## Measuring

- 18 Load  $\blacksquare 20 \, \mu L$  of reaction solution into 384-well plate
- 19 Measure the fluorescence excitation and emission intensity