Supporting information

# Research on a Highly Sensitive Aptamer Sensor for *Vibrio alginolyticus* Based on CRISPR-Cas13a and T7 Transcription Cascade Amplification

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**Table 1.** Oligonucleotide sequences used in this study

| Name | Sequence(5'-3') |
|---|---|
| RZ-1 | TCAGTCGCTTCGCCGTCTCCTTCAGCCGGGGTGGTCAGTAGGA GCAGCACAAGAGGGAGACCCCAGAGGG |
| RZ-4 | TCAGTCGCTTCGCCGTCTCCTTCGTAGGAGGTAGTCGGAGAGGCGAATGAGAGGGGAAGCACAAGAGGGA GCACAAGAGGGAGACCCCAGAGGG |
| RZ-8 | TTTCTTCTATTCGCGATCTCATACAACTTACTTATCTCATTTCTTTACC |
| RZ-9 | GACGCTTACTCAGGTGTGACTCG-TTTCTTCTATTCGCGATCTCATACAACTTACTTATCTCATTTCTTTACC-CGAAGGACGC AGATGAAGTCTC |
| F1 | CTC CGC ACG ACT GCC ATC TA |
| R1 | TCC CAC AAG GAC GCC ATA AA |
| Apt-RZ9 | GACGCTTACTCAGGTGTGACTCGTTTCTTCTATTCGCGATCTCATACAACTTACTTATCTCATTTCTTTACCCGAAGGACGCAGATG AAGTCTC |
| Blocker-RZ9-1 | TATGAGATCGCGAATAGAAGTTTTTTTTTTTTTGTCACACCTGAGTAAGCGTC |
| Hp-RZ9-1 | GACGCTTACTCAGGTGTGACTAATACGACTCACTATAGCTTCTATTCGCGATCTCATACCCTATAGTGAGTC GTATTAGT |
| Promoters | TAATACGACTCACTATAGGG |
| Apt-RZ9 | GACGCTTACTCAGGTGTGACTCGTTTCTTCTATTCGCGATCTCATACAACTTACTTATCTCATTTCTTTACCCGAAGGACGCAGATG AAGTCTC |
| Blocker-RZ9-1 | TATGAGATCGCGAATAGAAGTTTTTTTTTTTTTGTCACACCTGAGTAAGCGTC |
| Hp-RZ9-1 | GACGCTTACTCAGGTGTGACTAATACGACTCACTATAGCTTCTATTCGCGATCTCATACCCTATAGTGAGTC GTATTAGT |
| Promoters | TAATACGACTCACTATAGGG |
| T7-序列 | GAAATTAATACGACTCACTATAGGG |

| | |
|---|---|
| Cas13a-crRNA（RZ9-1） | AGTCGTATTAGTCACACCTGAGTAAGCGTCGTTTTAGTCCCCTTCATTTTTGGGGTGGTCCCCTATAGTGAGTCGTATTAATTTC |
| Target（RZ9-1） | GACGCTTACTCAGGTGTGACTAATACGACTCCCTATAGTGAGTCGTATTAATTTC |
| Cas13a-crRNA（RZ9-2） | AGTCGTATTAGTCACACCTGAGTAAGCGTCGTTTTAGTCCCCTTCATTTTTGGGGTGGTCCCCTATAGTGAGTCGTATTAATTTC |
| Target（RZ9-2） | CTTACTCAGGTGTGACTAATACGACTCACTCCCTATAGTGAGTCGTATTAATTTC |
| Cas13a-crRNA（RZ9-3） | GCGAATAGAAGCTATAGTGAGTCGTATTAGGTTTTAGTCCCCTTCATTTTTGGGGTGGTCCCCTATAGTGAGTCGTATTAATTTC |
| Target（RZ9-3） | CTAATACGACTCACTATAGCTTCTATTCGCCCCTATAGTGAGTCGTATTAATTTC |

**Table 2.** Original qPCR Ct Values and Quantitative Results

| Sample | Ct value (Rep 1) | Ct value (Rep 2) | Ct value (Rep 3) |
|---|---|---|---|
| **1** | **15.87** | **16.87** | **16.52** |
| **2** | **15.67** | **16.89** | **18.98** |
| **3** | **18.5** | **19.7** | **17.9** |
| **4** | **21.45** | **21.34** | **22.23** |
| **5** | **24.36** | **23.23** | **24.34** |
| **6** | **30.43** | **32.1** | **30.8** |
| **7** | **31.81** | **30.2** | **31.23** |
| **8** | **33.46** | **32.3** | **34.9** |
| **9** | **15.92** | **16.45** | **16.2** |
| **10** | **18.06** | **18.78** | **18.8** |
| **11** | **18.87** | **18.11** | **19.2** |
| **12** | **21.76** | **21.3** | **22.3** |
| **13** | **23.56** | **24.3** | **24.3** |
| **14** | **31.08** | **31.11** | **32.4** |
| **15** | **31.07** | **31.22** | **31.8** |
| **16** | **33.05** | **32.4** | **32.87** |
| **17** | **32.25** | **31.2** | **31.89** |
| **18** | **32.57** | **32.44** | **33.8** |
| **19** | **34.02** | **35.8** | **32.9** |
| **20** | **33.28** | **37.8** | **32.34** |