Supporting Information

Screening and Identification of DNA Aptamers against T-2 Toxin Assisted by Graphene Oxide

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Impact of methanol on PCR Amplification. A series of PCRs containing 0%, 0.1%, 1.0%, 10.0% (volume ratio) of methanol in the PCR system were performed to study the effect of methanol from the special binding buffer on PCR amplification. Two parallel groups were set under each condition. According to 8% native PAGE analysis (Figure S1), the PCR products of which contained 0.1% and 1.0% of methanol are almost the same as those without the addition of methanol, but the bands of those contained 10.0% of methanol are weaker showing PCR amplification is inhibited by high concentration of methanol. Note that only 5 μL of incubatiuon buffer containing 1.0% of methanol was added as PCR template to PCR tube with a final volume of 50 μL, that is, the methanol content would be diluted tenfold during PCR, with a final concentration of 0.1% in the PCR system. Therefore, 1.0% of

methanol (v/v) ultimately involved in the special binding buffer would not have negative effects on PCR, but it would help to increase the compatibility of T-2 and oligonucleotides, enabling T-2 with full access to ssDNAs in free solution.

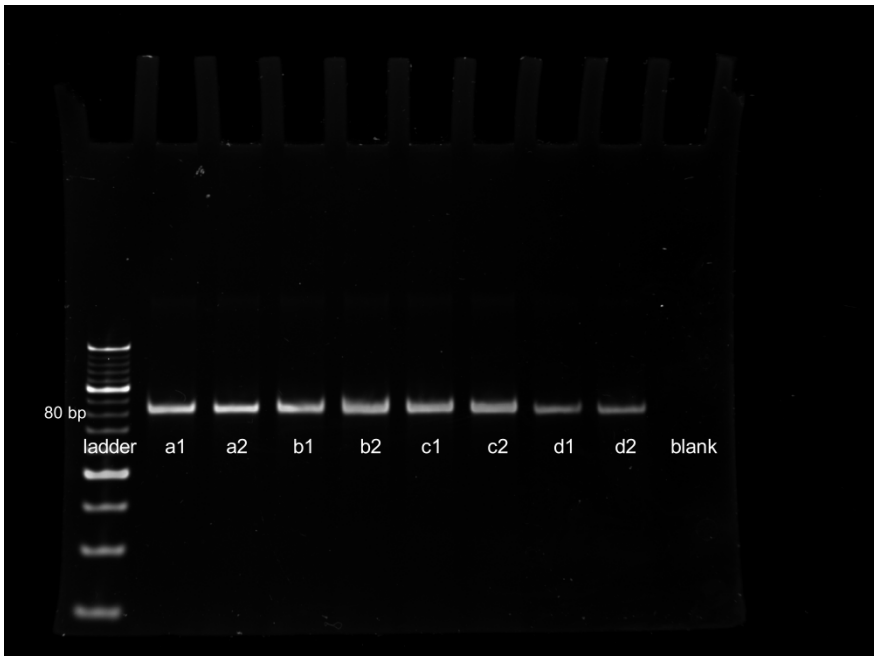

Figure S1. Characterization about impact of methanol on PCR amplification by 8% native PAGE. Lane a1 and a2: normal PCR products without methanol added; Lane b1 and b2: 0.1% of methanol was added; Lane c1 and c2: 1.0% of methanol was added; Lane d1 and d2: 10.0% of methanol was added.