Electronic Supplementary Material (ESI) for Analyst.

Fluorescence aptasensor based on single oligonucleotide-mediated isothermal quadratic amplification and graphene oxide fluorescence quenching for ultrasensitive protein detection

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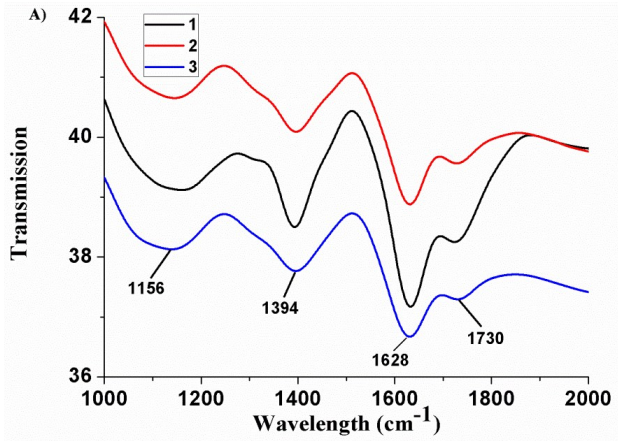
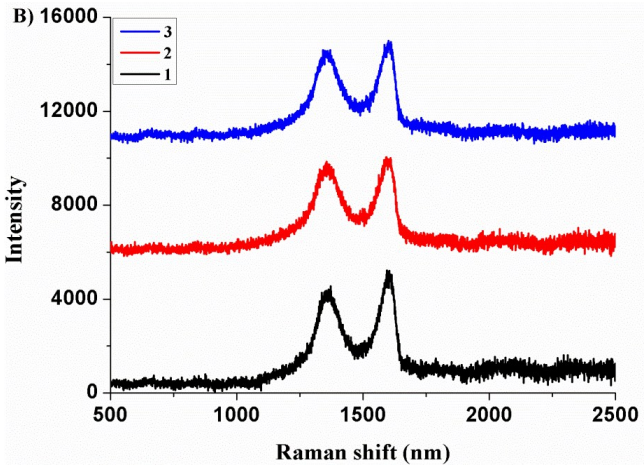
Table S1 Comparison of analytical methods capable of sensing CEA

Methods	Detection limit	References
Electrochemical aptasensor	1.5 pg/mL	1
Fluorescence and chemiluminescen aptasensor imaging	60 and 48 pg/mL	2
Fluorescent resonance energy transfer aptasensor	100 pg/mL	3
Fluorescence aptasensor Exonuclease III–assisted	1.2 pg/mL	4
Carbon dots-aptasensor	300 pg/mL	5
Fluorescent aptasensor based on GO and quadratic amplification	0.0285 pg/mL	This work





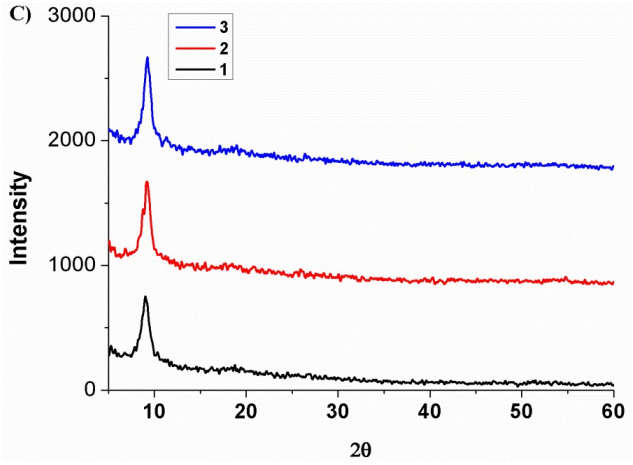


Fig. S1. The FT-IR spectrum (A), Raman spectrum (B), and XRD (C) of the different batches of GO (1, 2, and 3).

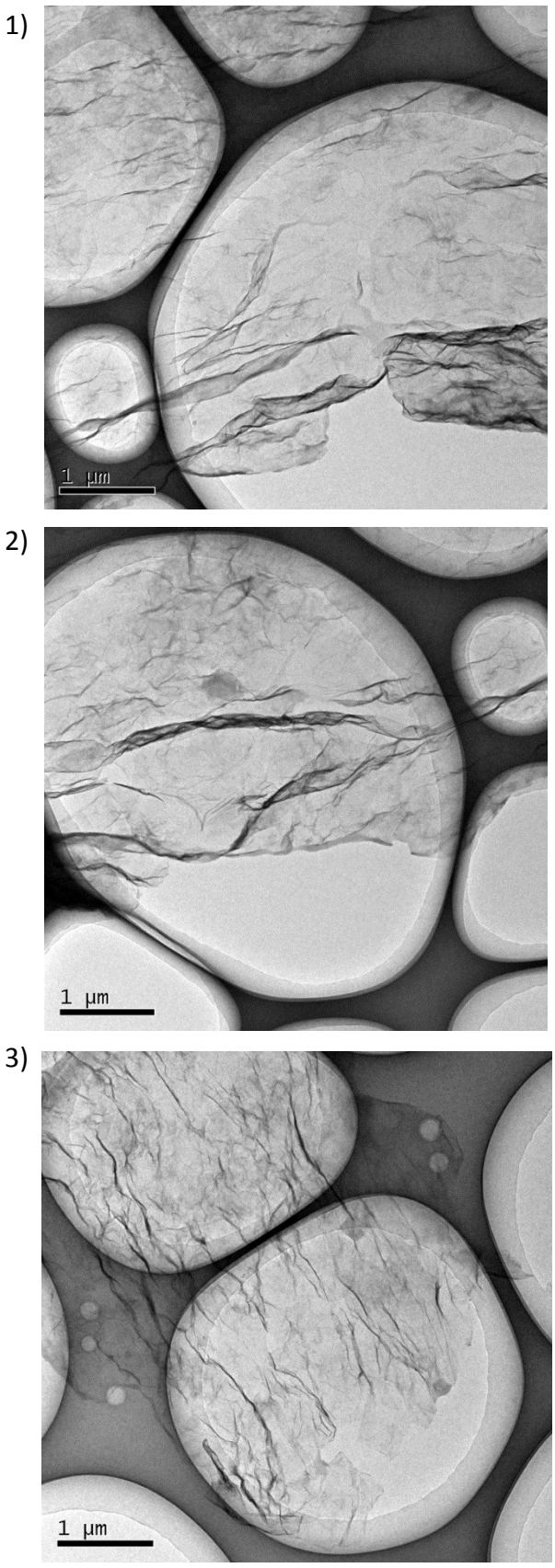


Fig. S2. TEM image of the different batches of GO (1, 2, and 3).

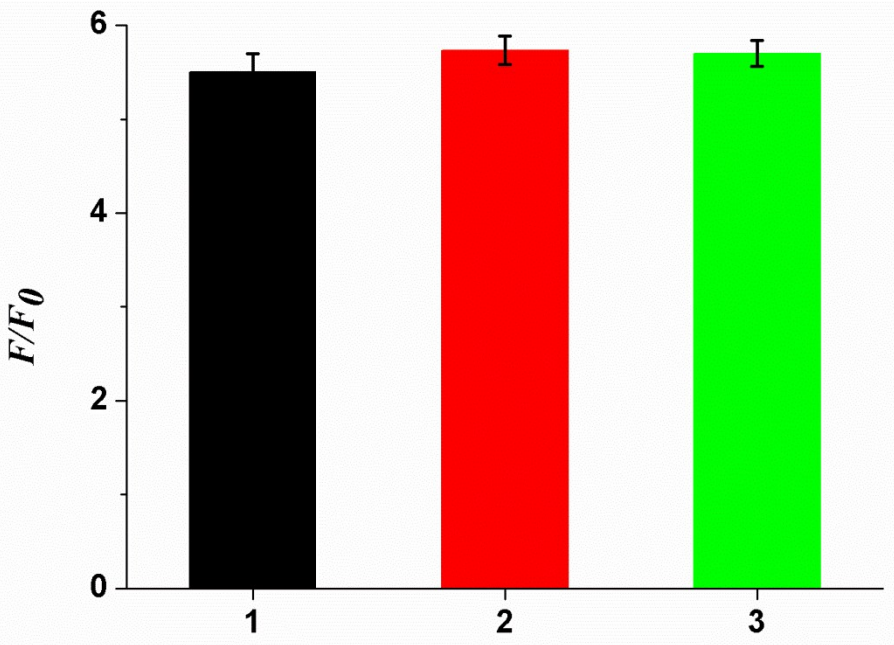


Fig. S3 The effects of the different batches (1, 2, and 3) of GO on the detect signal (F/F_0). Where F or F_0 were the fluorescence intensity in the presence and absence of CEA, respectively.

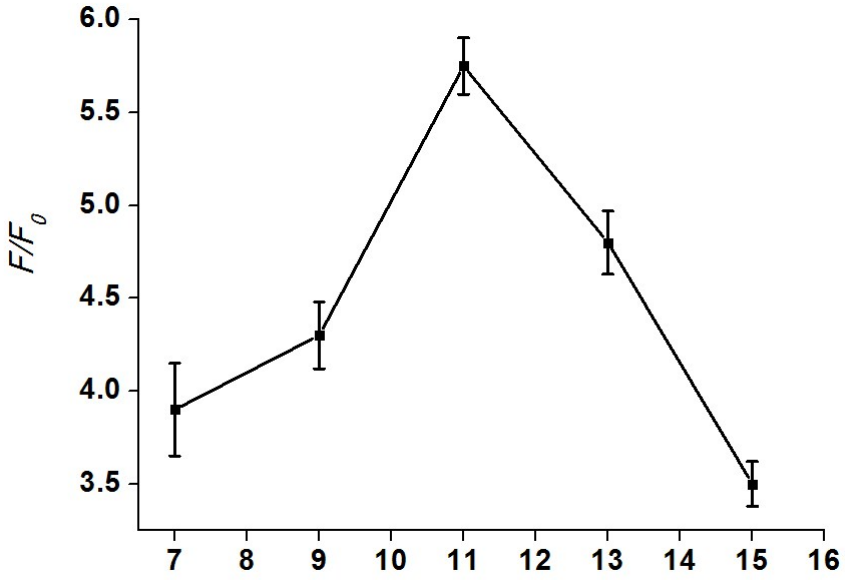


Fig. S4. The effect of hybridizing ability of the section III with the section I in the hairpin H1 probe on *F/F0*. Experimental conditions: CEA, 500 pg/mL; hairpin, 80 nM; GO, 100, μg/mL; klenow fragment, 25 U/mL; T7 Exo, 20 U/ml. Where *F* or F_0 were the fluorescence intensity in the presence and absence of CEA, respectively.

References

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