# Electronic Supplementary Information

# Exonuclease III-assisted signal amplification strategy for sensitive fluorescence detection of polynucleotide kinase based on poly(thymine)-templated copper nanoparticles
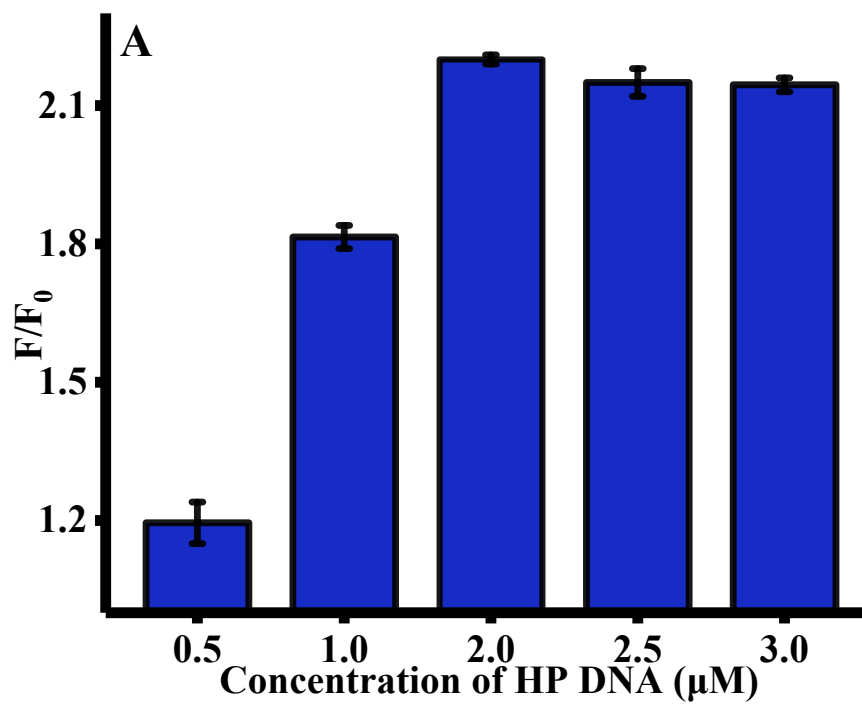
**Han Zhao [a], Ying Yan [a], Mingjian Chen [a], Tingting Hu [a], Kefeng Wu [a],**

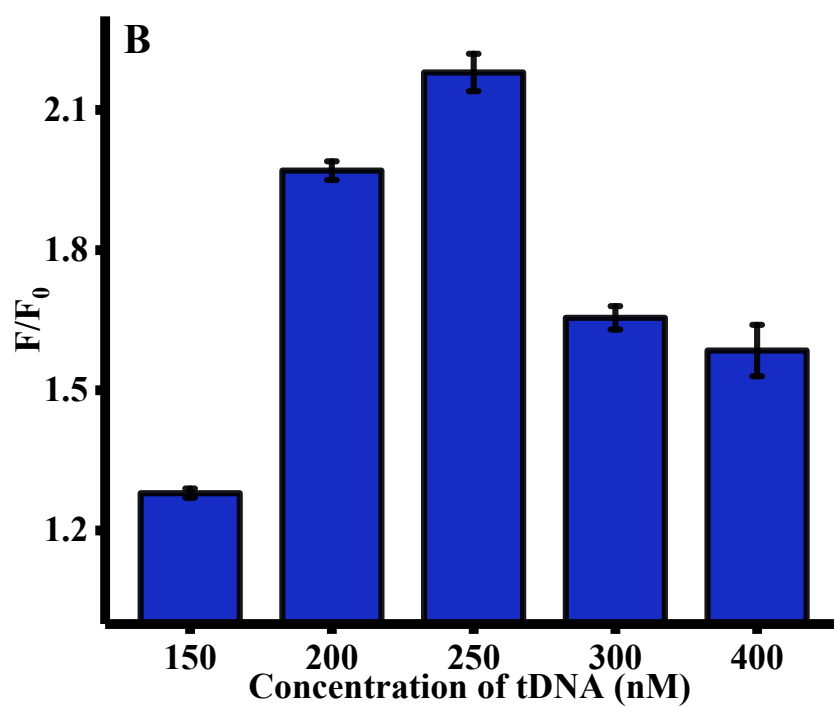**Haisheng Liu [a], Changbei Ma [a,\*]**

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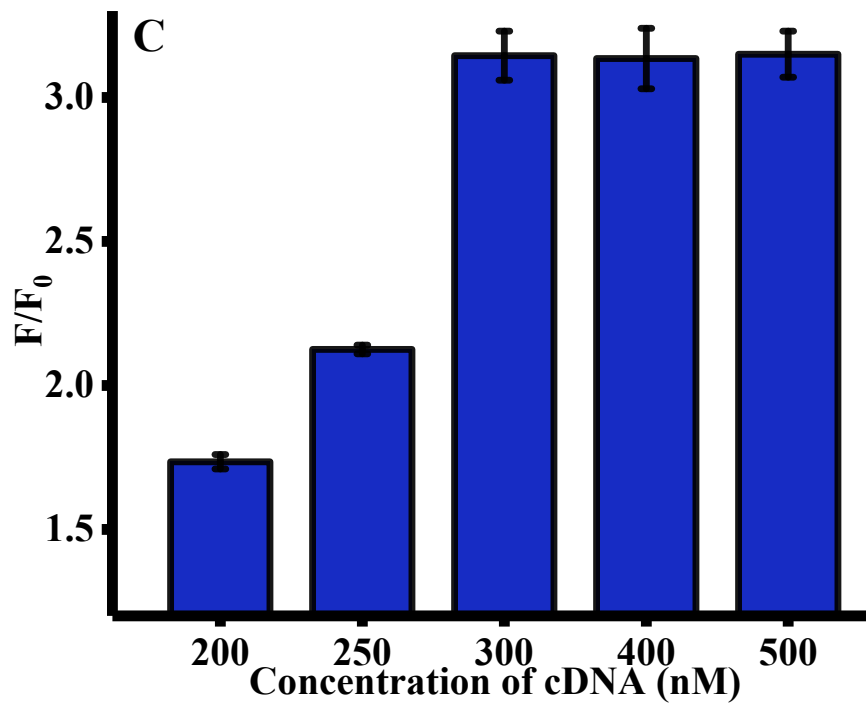**\***Authors to whom correspondence should be addressed; E-mails:
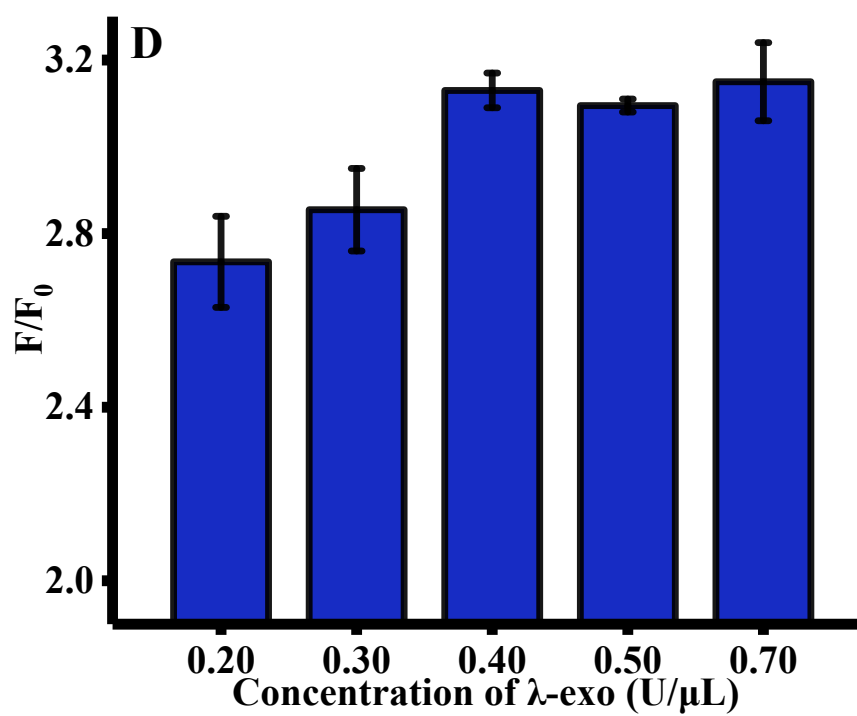
macb2012@csu.edu.cn.

**Fig. S1** Optimization of the concentration of HP DNA probe. Error bars represent the standard deviation of three experiments.
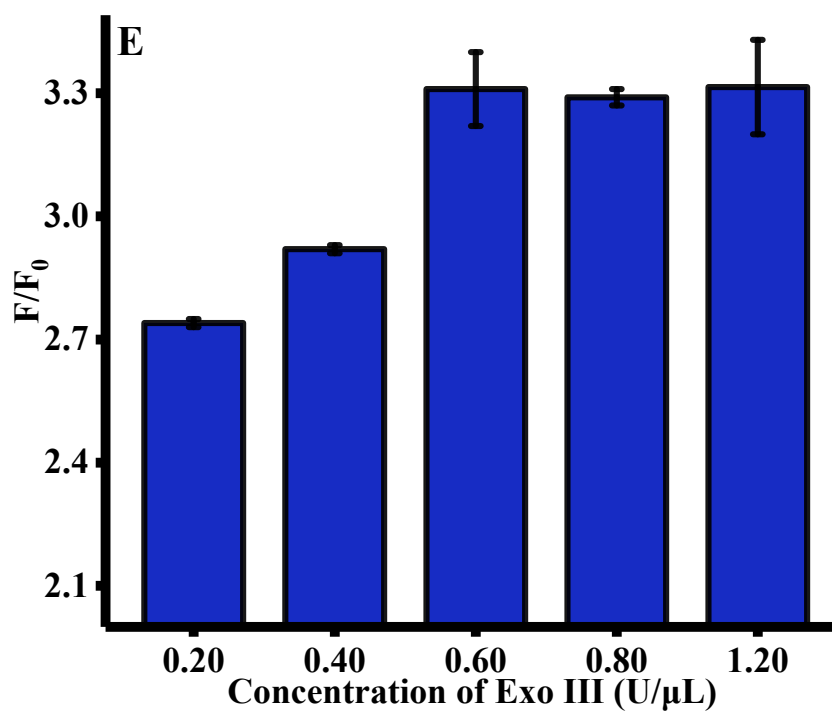
**Fig. S2** Optimization of the concentration of tDNA. Error bars represent the standard deviation of three experiments.
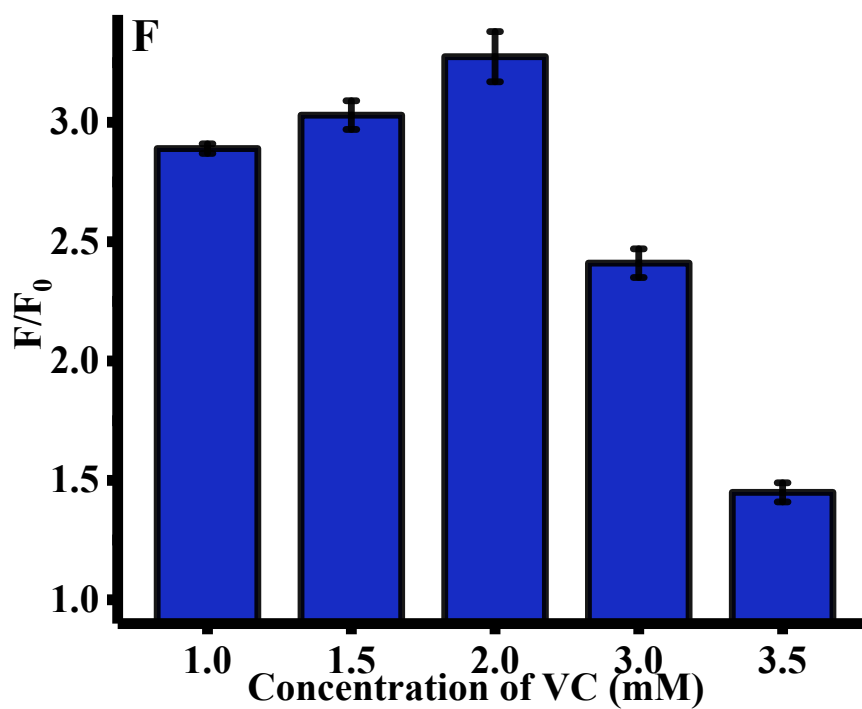
**Fig. S3** Optimization of the concentration of cDNA. Error bars represent the standard deviation of three experiments.

**Fig. S4** Optimization of the concentration of λ exo. Error bars represent the standard deviation of three experiments.

**Fig. S5** Optimization of the concentration of Exo III. Error bars represent the standard deviation of three experiments.

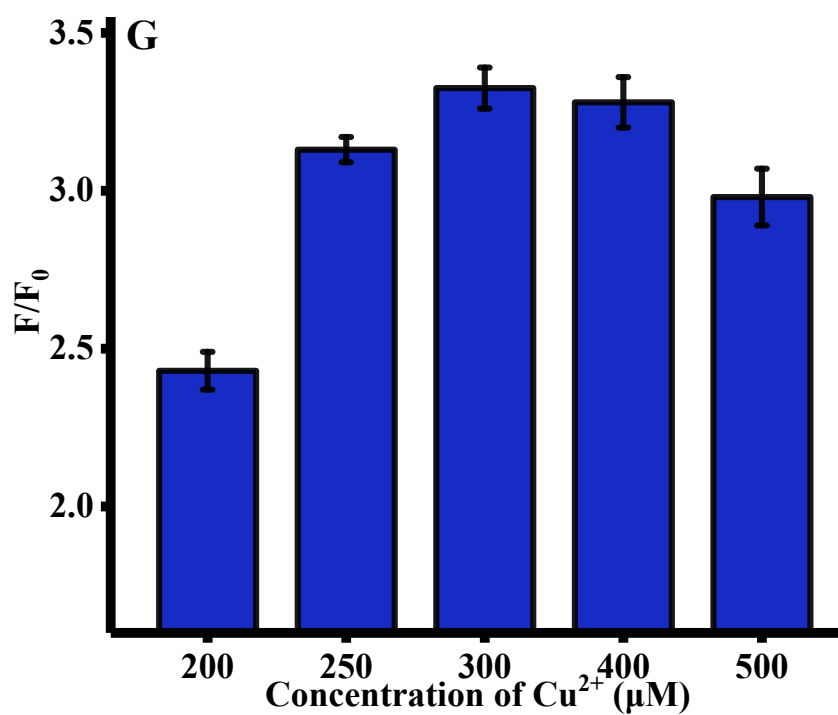**Fig. S6** Optimization of the concentration of VC. Error bars represent the standard deviation of three experiments.

**Fig. S7** Optimization of the concentration of $Cu^{2+}$. Error bars represent the standard deviation of three experiments.