

Supporting Information

Target triggered ratiometric fluorescence assay of intracellular microRNA-21 with a nanosystem containing ZnO@polydopamine and DNAzyme probe

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Fig. S5 Influence of the miRNA-21 concentration on fluorescence recovery (green FAM fluorescence signal versus red TAMRA fluorescence signal) in *in vitro* miRNA-21 detection.

Fig. S6 Cell viability determined by MTT assay.

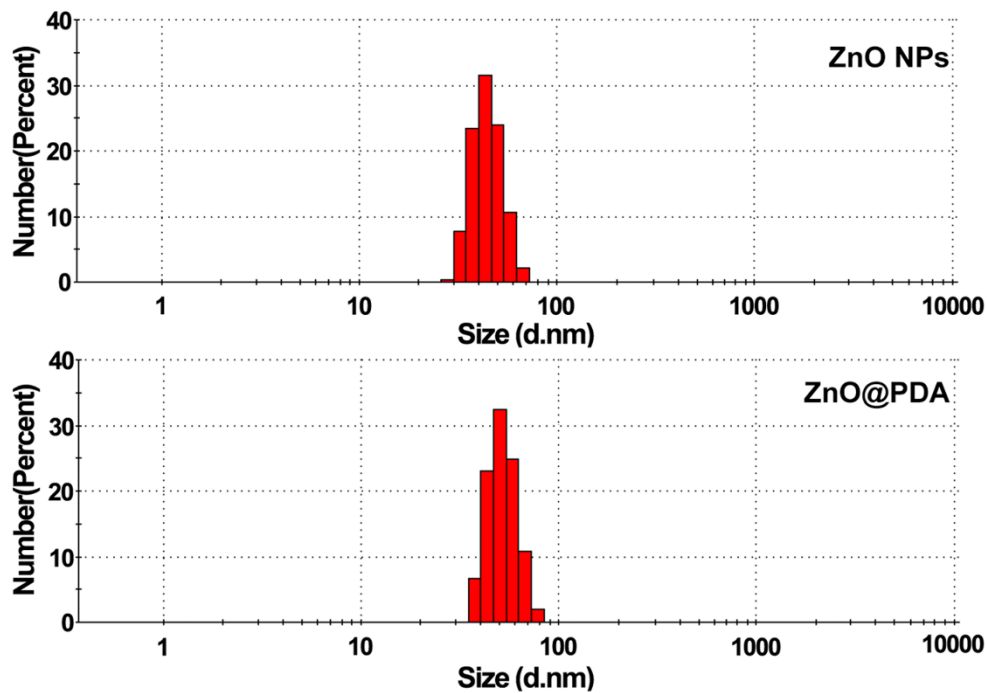


Fig. S1 The dynamic light scattering (DLS) measurement of ZnO nanoparticles (up) and ZnO@PDA (down). The average diameters of ZnO nanoparticles and ZnO@PDA were 43.8 ± 3.2 nm and 54.7 ± 3.7 nm, respectively.

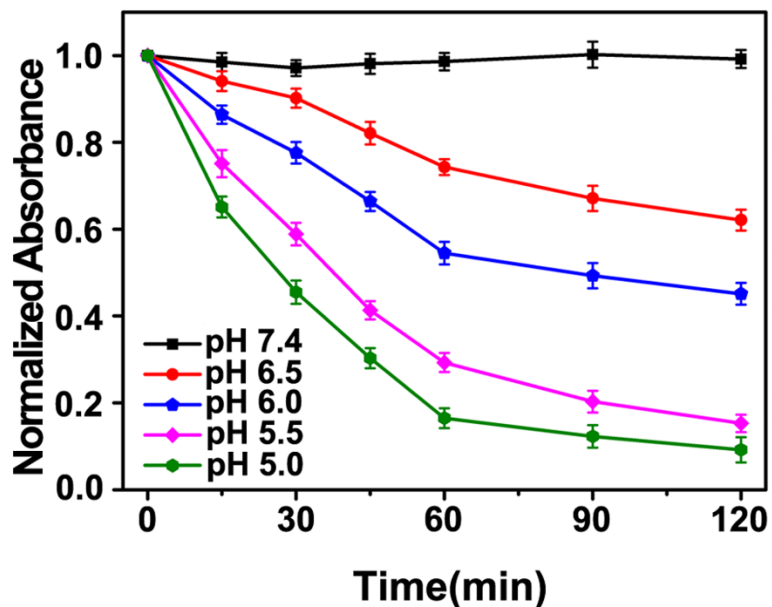


Fig. S2 Time course of ZnO absorbance changes (370 nm) caused by ZnO decomposition at different pH.

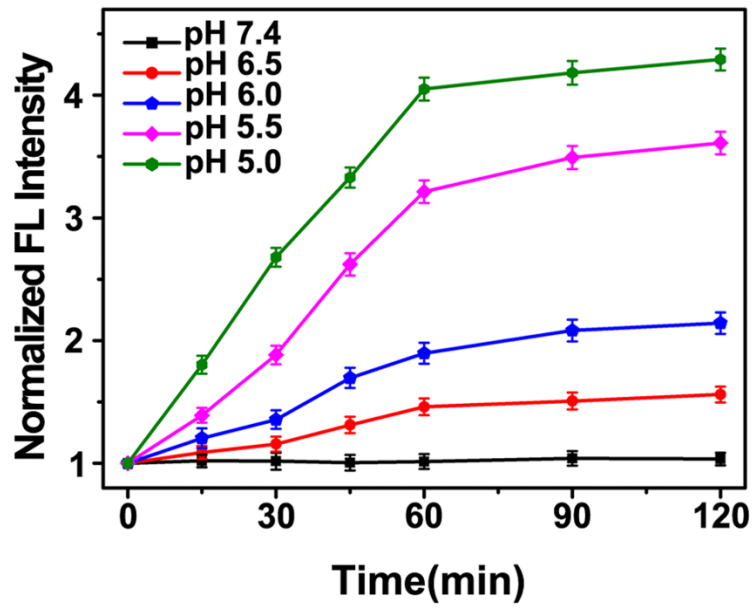


Fig. S3 Fluorescence recovery of ZnO@PDA/F-DNA nanosystem caused by ZnO decomposition at different pH.

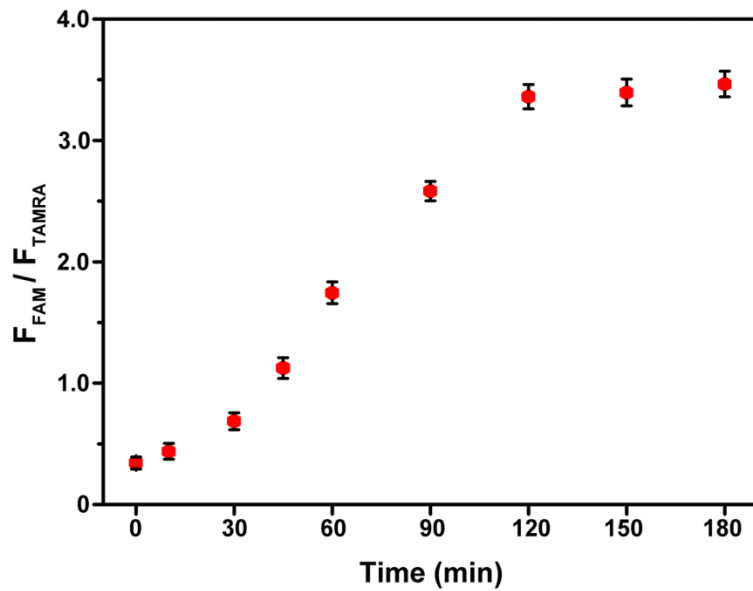


Fig. S4 Influence of the incubation time on fluorescence recovery (green FAM fluorescence signal versus red TAMRA fluorescence signal) in *in vitro* miRNA-21 detection.

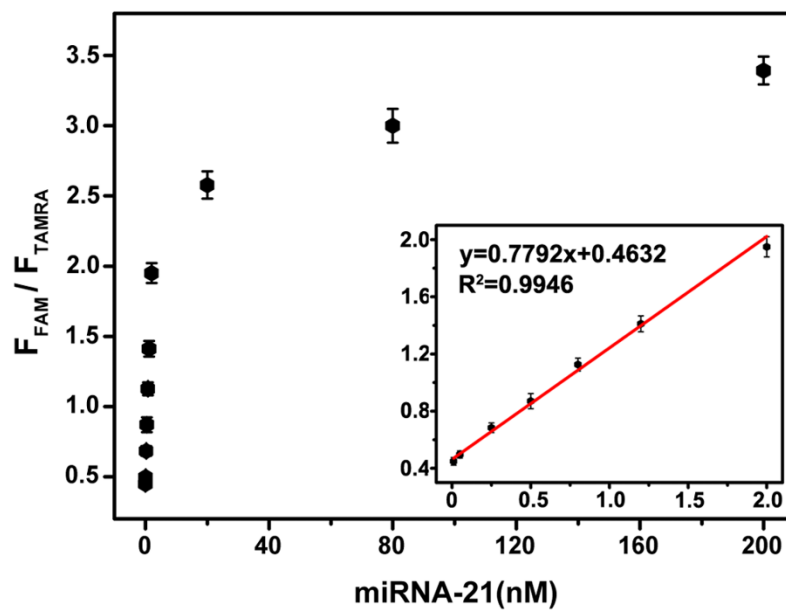


Fig. S5 Influence of the miRNA-21 concentration on fluorescence recovery (green FAM fluorescence signal versus red TAMRA fluorescence signal) in *in vitro* miRNA-21 detection. Insert: linear correlation between the fluorescence intensity ratio (FAM/TAMRA) and miRNA-21 concentration.

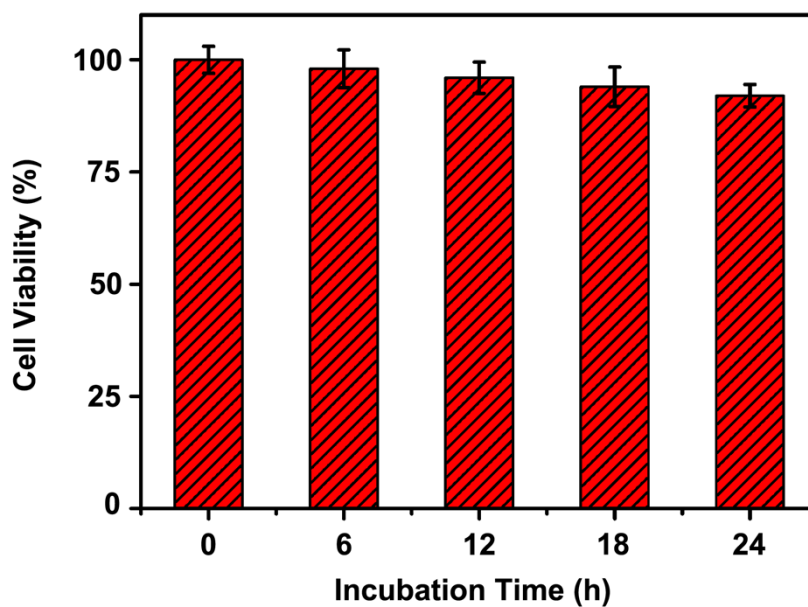


Fig. S6 Cell viability determined by MTT assay. L-02 cells were incubated with ZnO@PDA/probe nanosystem (20 $\mu\text{g}/\text{mL}$) for different times.