Supporting Information

Biodegradable nanoparticle-assisted and multiplexed imaging of asymmetric RNA expressions in live cells for precise cancer diagnosis and prognosis

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Supplementary Figures:

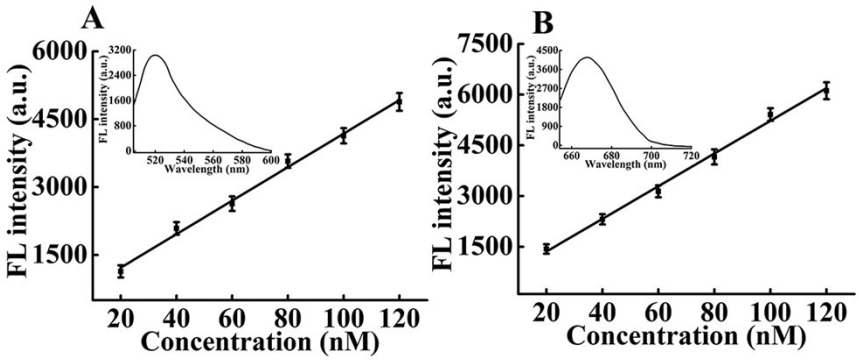

Fig. S1 Calibration plots of fluorescence intensity *vs.* HP1-FAM (A) and S3-Cy5 (B) concentrations. Inset: fluorescence responses of 10 μg mL^{-1} of Dz/HP1-FAM and S1/S2/S3-Cy5 functionalized ZnO NPs treated with Tris buffer (pH 5.0) for 30 min.

In order to calculate the conjugation efficiency, Dz/HP1-FAM (without the Dabcyl quencher) and S1/S2/S3-Cy5 (without the BHQ-2 quencher) were immobilized on ZnO-NH_2 nanoparticles *via* EDC/NHS. After centrifugation and Tris buffer (pH 5.0) treatment of the Dz/HP1-FAM and S1/S2/S3-Cy5 functionalized ZnO NPs for 30 min, fluorescence of the solution was measured. By comparing to the calibration curves of the HP1-FAM and S3-Cy5, the concentrations of Dz/HP1 and S1/S2/S3 on 10 μg mL^{-1} of ZnO NPs are 67 nM and 79 nM, respectively.

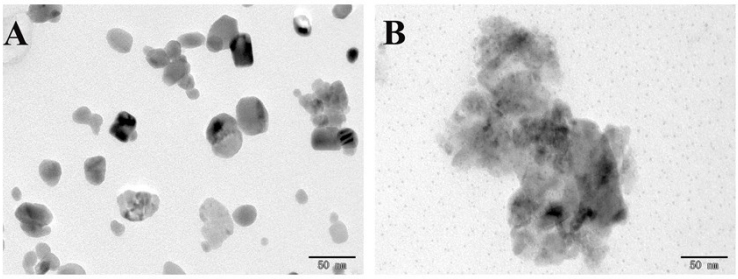

Fig. S2 TEM images for ZnO NPs before (A) and after (B) the treatment of Tris buffer at pH = 5.0.

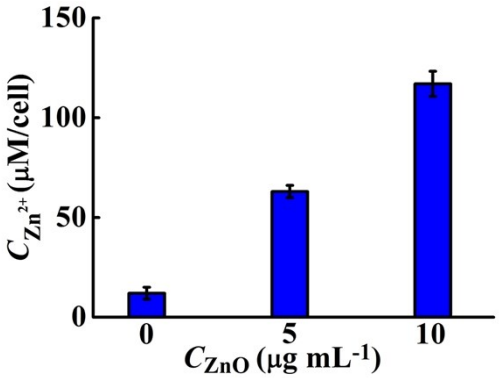

Fig. S3 ICP-MS analysis of Zn^{2+} in MCF-7 cells treated with 0, 5 μg mL^{-1}, 10 μg mL^{-1} of ZnO nanoprobes.