

Supporting Information

Supporting tables

Table S1. Oligonucleotide sequences used in detect telomerase activity based on Ag NCs.

Name	Sequence (5'-3')
H sequence	<i>CCCCCCCCCCTTTTTAACCCTAAAATCCGTCGAGCAGA</i> <u>GTT</u>
comple+1R	TTAGGGTTAGGGTTA
comple +2R	TTAGGGTTAGGGTTAGGGTTA
comple +3R	TTAGGGTTAGGGTTAGGGTTAGGGTTA

In the H sequence, the italic part is the scaffold for the synthesis of functionalized silver nanoclusters, the bolded section is the complementary strand with the fragment which was extended by telomerase triggered the Ts oligonucleotide. The underlined part is the Ts sequence. comple+1R, comple+2R and comple+3R indicate that the DNA sequence which include complementary chain of the nine bases and one, two and three additions repetitive nucleotide sequences (TTAGGG).

Supporting Figures

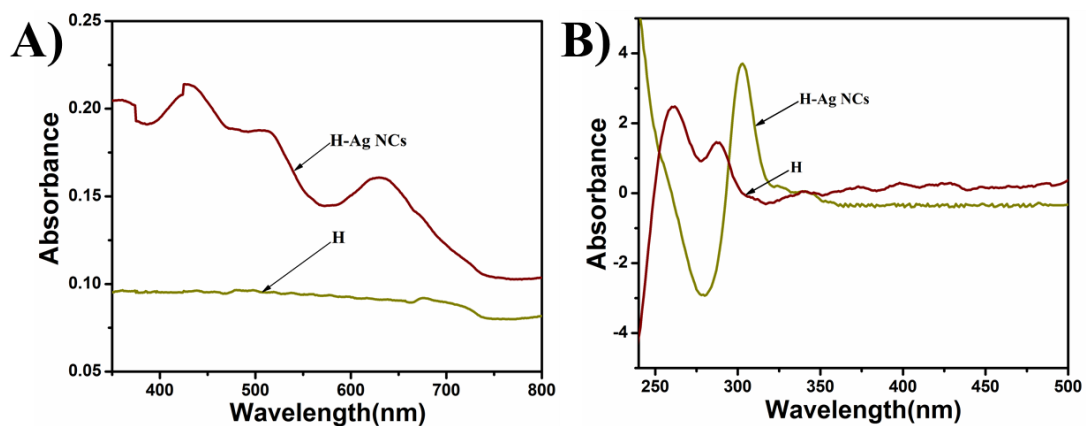


Figure S1. (A) UV absorption spectra of H sequence and H-Ag NCs. (B) Circular dichroism spectra of H-Ag NCs and H with 0.1 M NaCl. The concentrations of H sequence were 10 μ M.

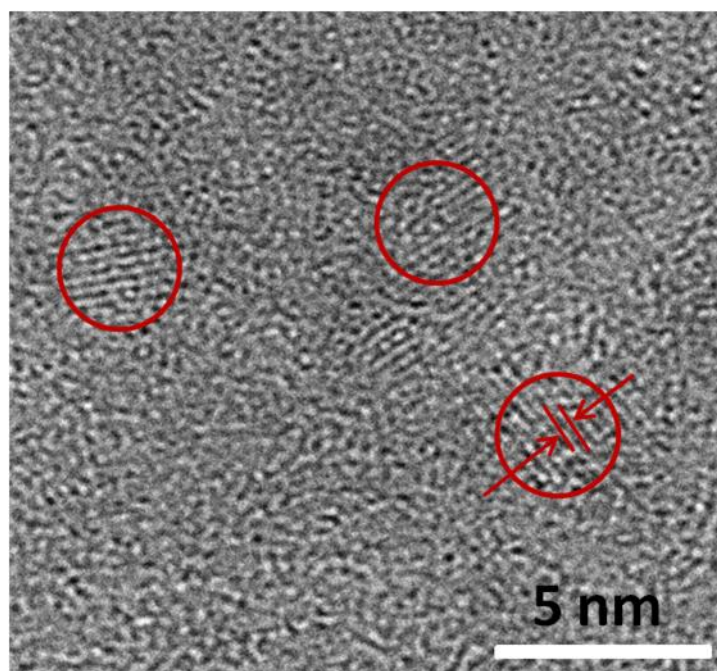


Figure S2. HRTEM image of the individual H-Ag NCs.

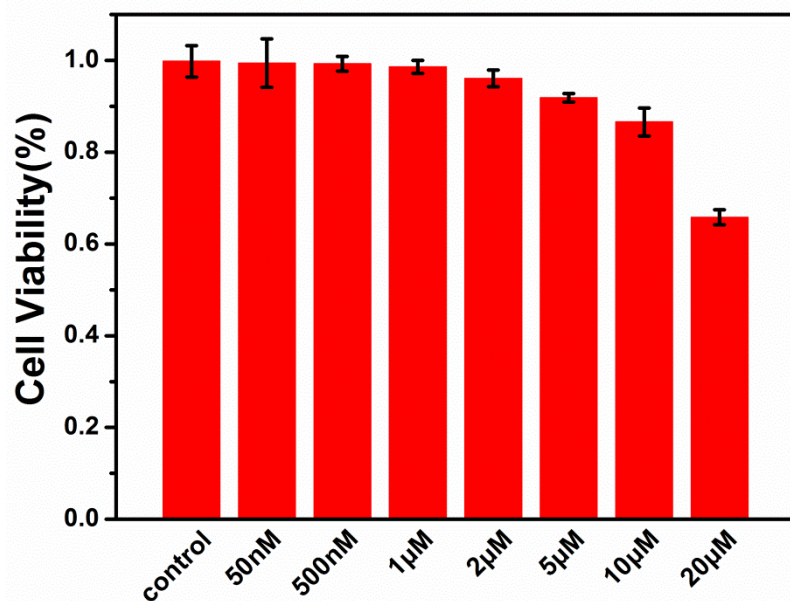


Figure S3. Viability of HeLa cells after incubation with different concentration of H-Ag NCs for 24 h.

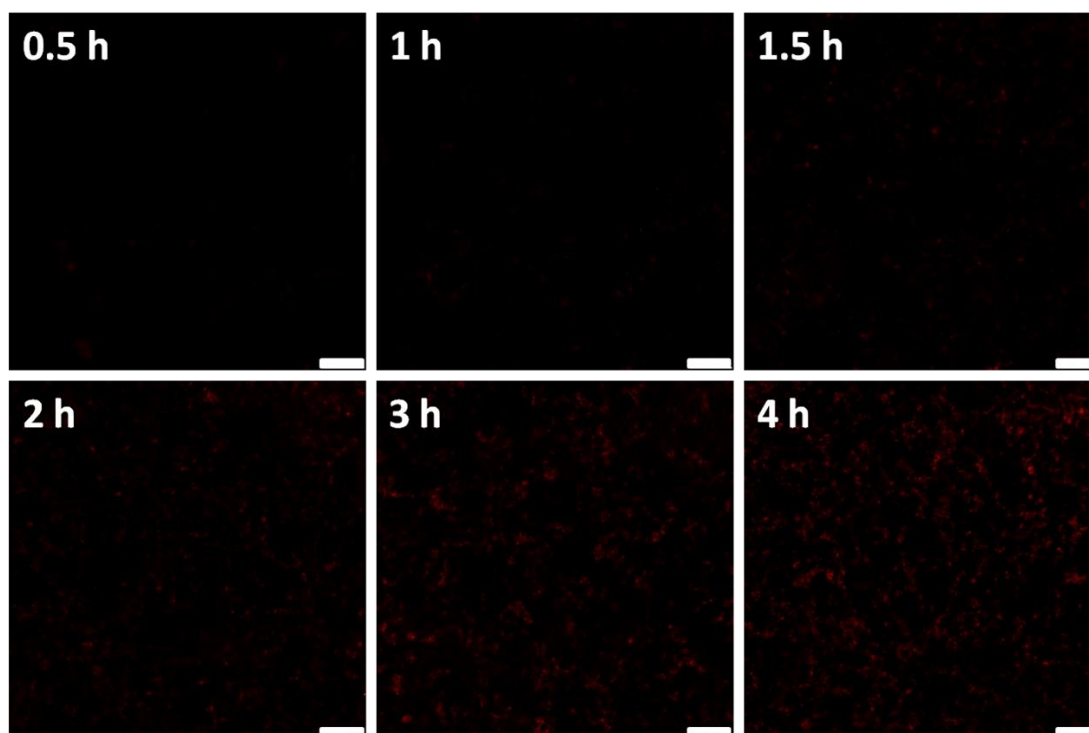


Figure S4. Time course images of HeLa cells for intracellular telomerase activity detection by G-rich DNA Enhanced Fluorescence Intensity of AgNCs. HeLa cells were transfected with H-Ag NCs for different time and then imaged by confocal microscopy at specific time points. Scale bar: 75 µm.

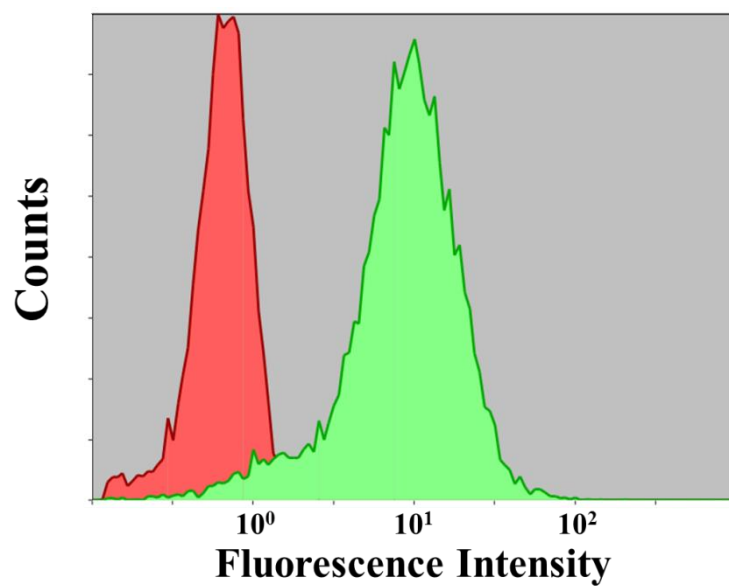


Figure S5. Flow cytometry of HeLa cells transfected with H-Ag NCs probe for 0.5 h (red) and 4 h (green).

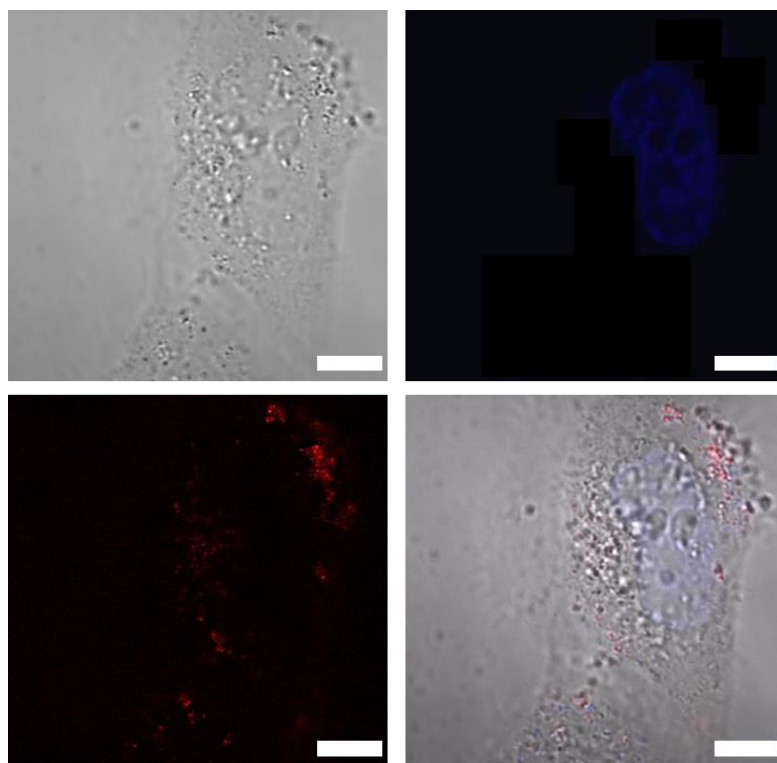


Figure S6. Counter staining image of MCF-7 cells. Cells were transfected with H-Ag NCs for 4 h, then fixed and nucleus stained with DAPI, imaged by confocal microscopy. Scale bar: 10 μ m.

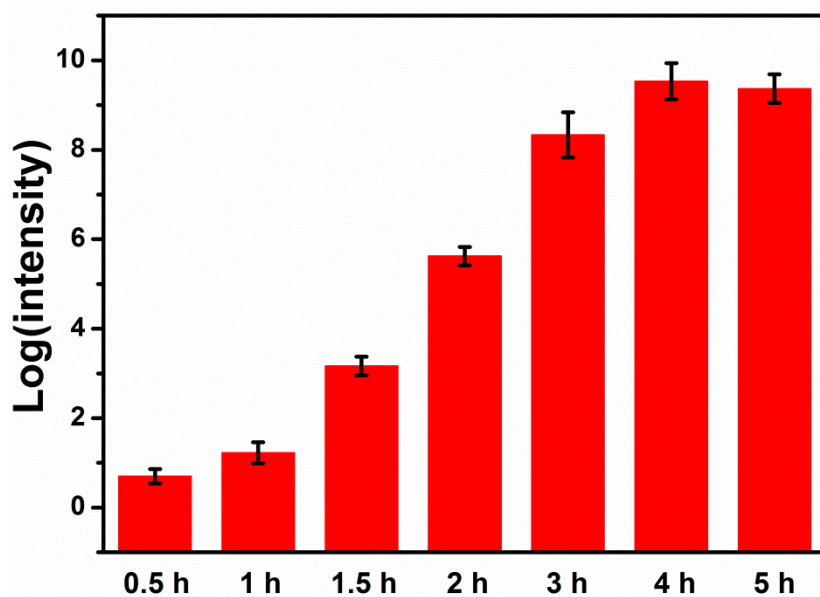


Figure S7. Flow cytometry of HeLa cells transfected with H-Ag NCs for different time points. Each well in the 6-well plate has 100,000 cells.

Single cell analysis

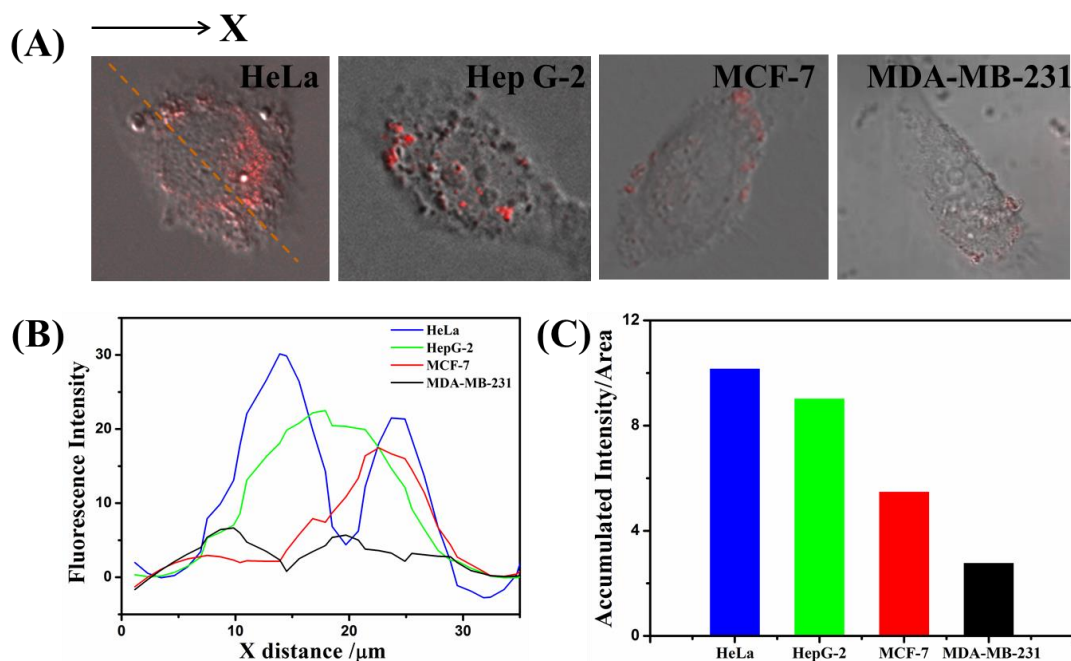


Figure S8. (A) Confocal microscopy images of HeLa cells, Hep G-2 cells, MCF-7 cells and MDA-MB-231 cells incubated with H-Ag NCs probe for 4 h; (B) Representative single-cell fluorescence image signal analysis; and (C) the fluorescence intensity per unit area of single cells with HeLa, Hep G-2, MCF-7 and MDA-MB-231.

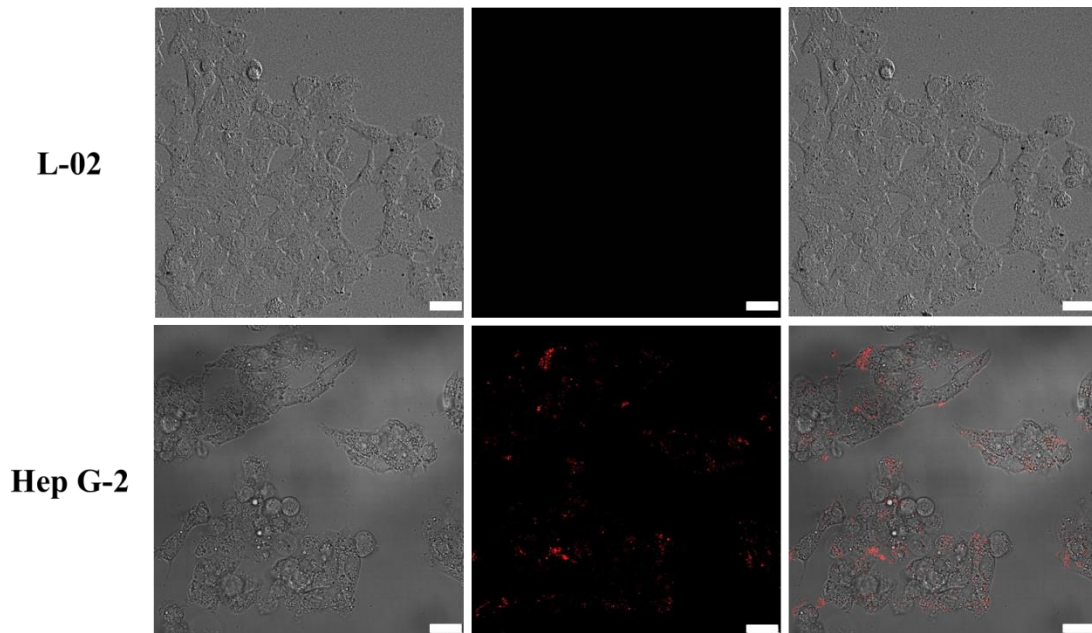


Figure S9. Confocal images of L-02 and Hep G-2 cells transfected with H-Ag NCs probe for 4 h. Scale bar was 50 μm .

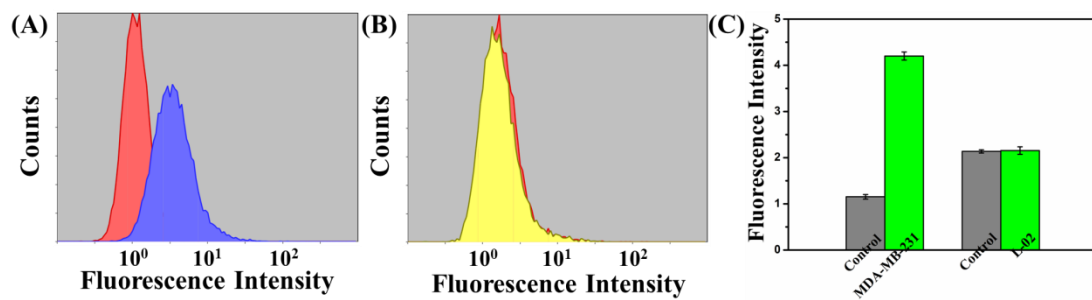


Figure S10. Flow cytometry of MDA-MB-231 cells (A) and L-02 cells (B) transfected with H-Ag NCs probe for 4 h; (C) Representative histogram plots of flow cytometry showing the intracellular fluorescence intensity upon incubation with H-Ag NCs probe for L-02 cells and MDA-MB-231 cells, respectively.