

Supplementary Information for

EGFR Antibody Conjugated Bimetallic Au@Ag Nanorods as Theranostic Platform for Enhanced SERS-Based Tumor Boundary Identification, Targeted Photoacoustic Imaging and Photothermal Therapy

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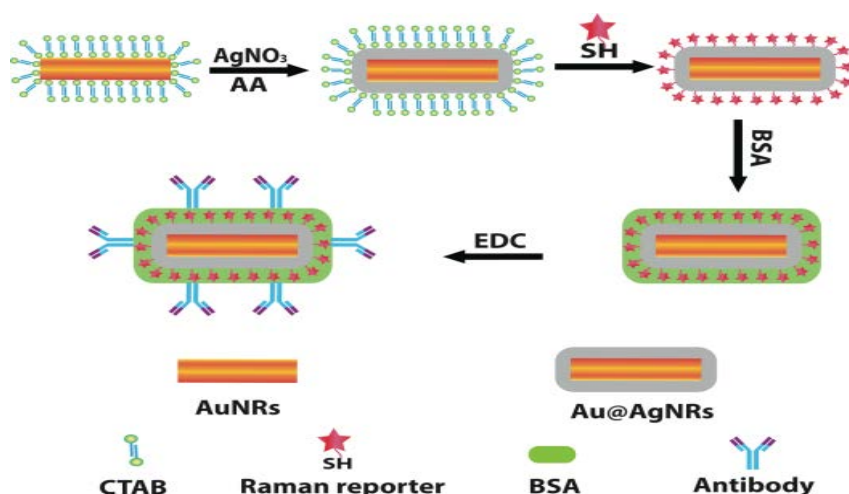


Fig. S1 Schematic procedure of preparation of EGFR-Au@Ag NRs-DTNB.

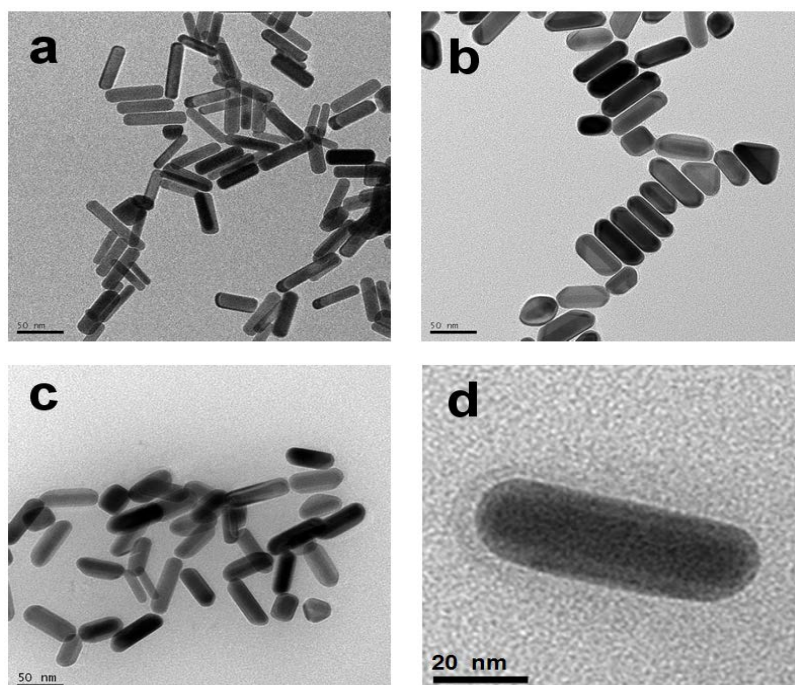


Fig. S2 TEM images of (a) AuNRs; (b) Au@AgNRs; (c) Au@AgNRs@BSA@EGFR; and (d) Au@AgNRs@BSA@EGFR.

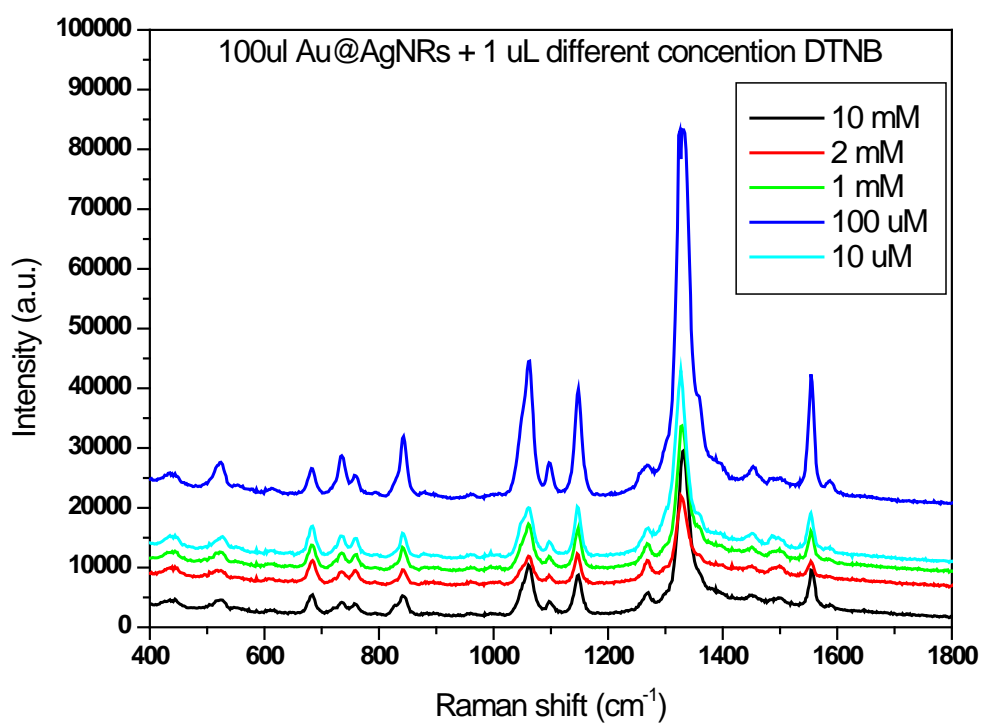


Fig. S3 Raman spectra of 100 μ l Au@Ag NRs mixed with 1 μ l different concentration of DTNB (10 μ M, 100 μ M, 1 mM, 2 mM, 10 mM).

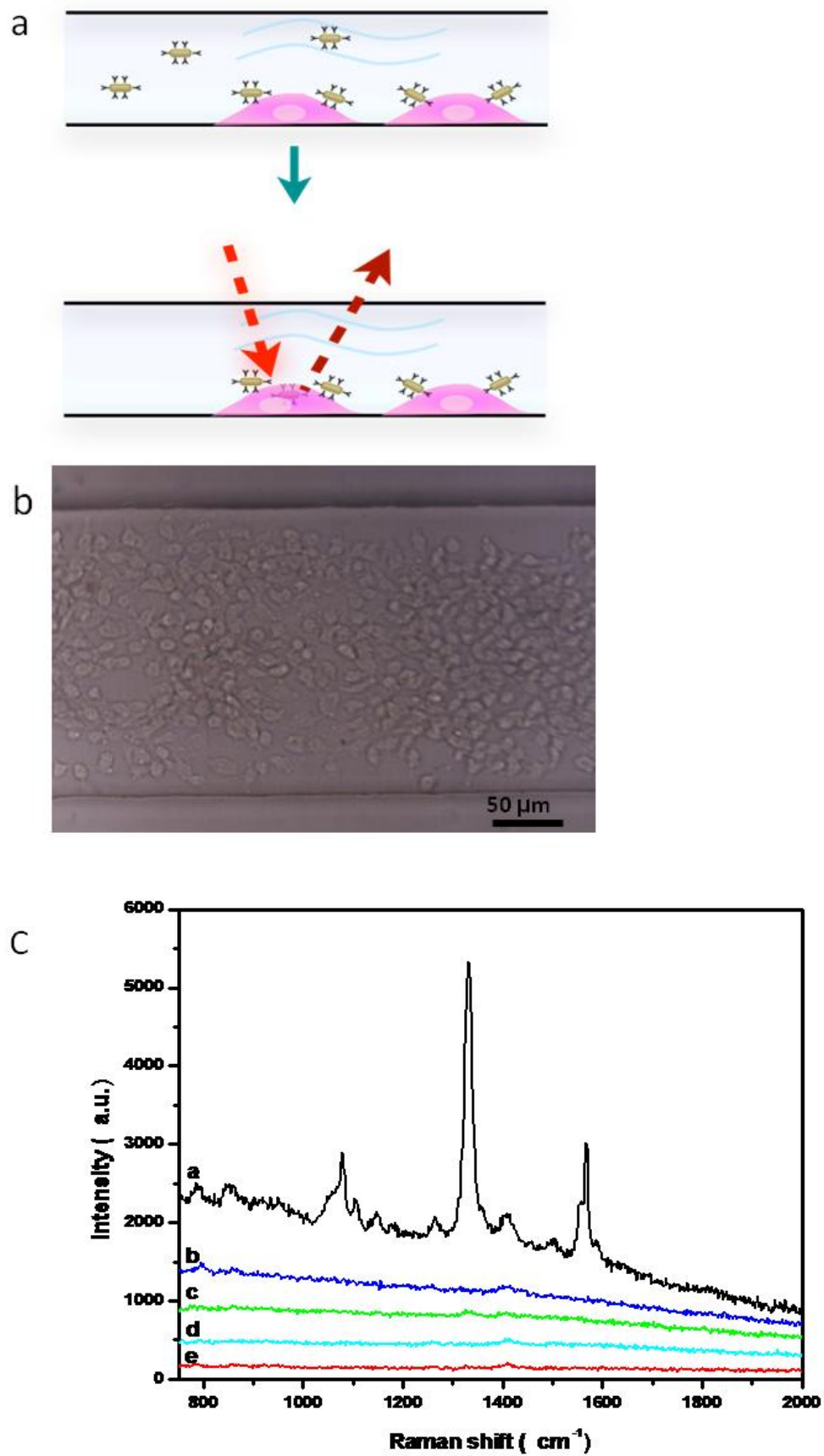


Fig. S4 Sequential steps for the formation of anti-EGFR conjugated SERS nanotags target MGC803 cell SERS detection. **(a)** Design of the chip. **(b)** Photograph of the MGC803 cells

cultured in the channel. (c) SERS spectra of cancer cells incubated with anti-EGFR conjugated SERS nanotags. Intracellular SERS spectra: **a.** DTNB labeled Au@AgNRs@BSA@anti-EGFR co-cultured with MGC803 cells; **b.** DTNB labeled Au@AgNRs@BSA; **c.** DTNB labeled Au@AgNRs@BSA@anti-EGFR, co-cultured with MDA-MB-435 cells; **d.** DTNB labeled Au@AgNRs@BSA co-cultured with MDA-MB-435 cells; and **e.** control only cell in channel, Inject 30 μ L 9.8×10^{10} particles /ml and the integration time was 5s.

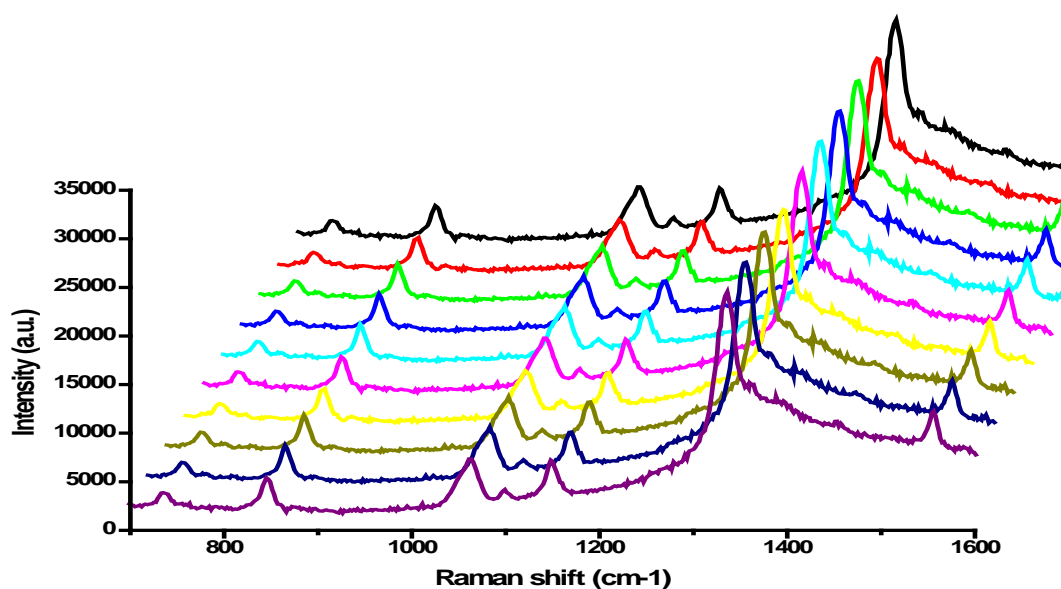


Fig. S5 SERS spectra of Au@AgNRs@BSA@anti-EGFR SERS nanotags measured at 10 random showing the uniformity of the signal in each address.