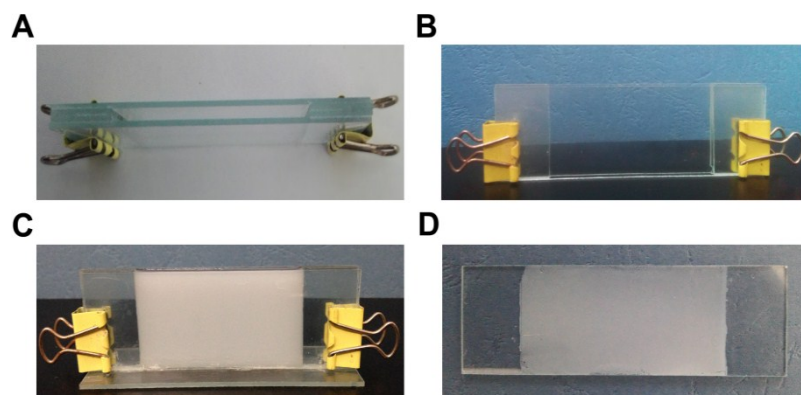


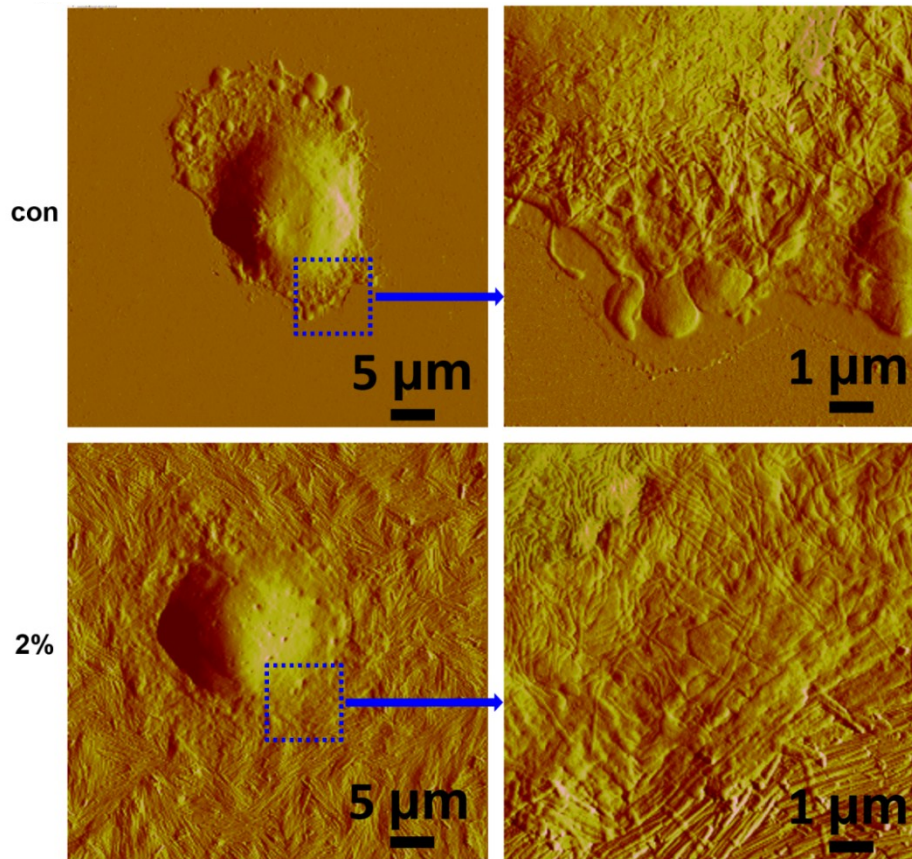
## Support information



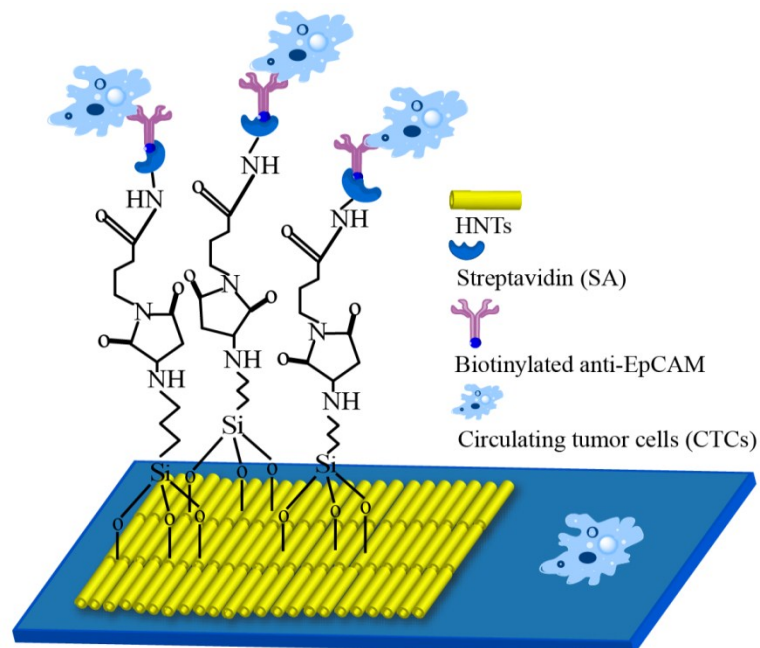
**Figure S1** The top view (A) and front view (B) of the slit-like confined space; The slit-like confined space with HNTs dispersion (C); The patterned HNTs coating on glass substrate prepared in the slit-like confined space (D).



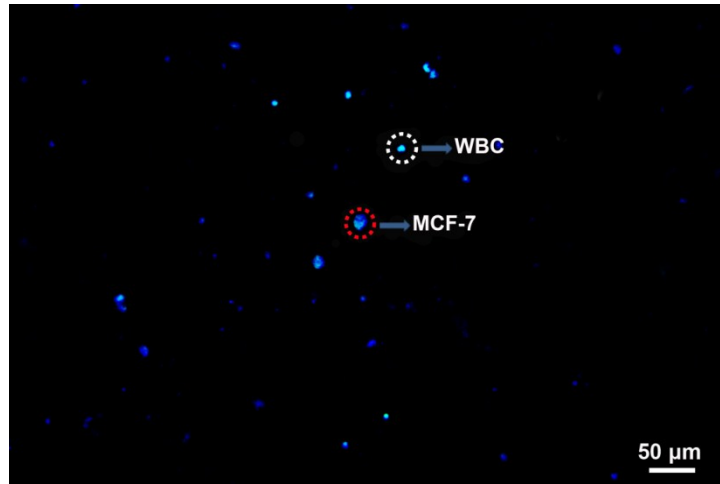
**Figure S2** The water contact angel of glass slides before (left) and after (right) modification.



**Figure S3** AFM image of the MCF-7 cell captured on the blank glass substrates and the 2% (w/v) HNTs coating.



**Figure S4** Schematic diagram of HNTs coating conjugated with anti-EpCAM and the capture of tumor cells.



**Figure S5** The DAPI fluorescence microscopy images of captured cells MCF-7 cells and white blood cells from whole blood.