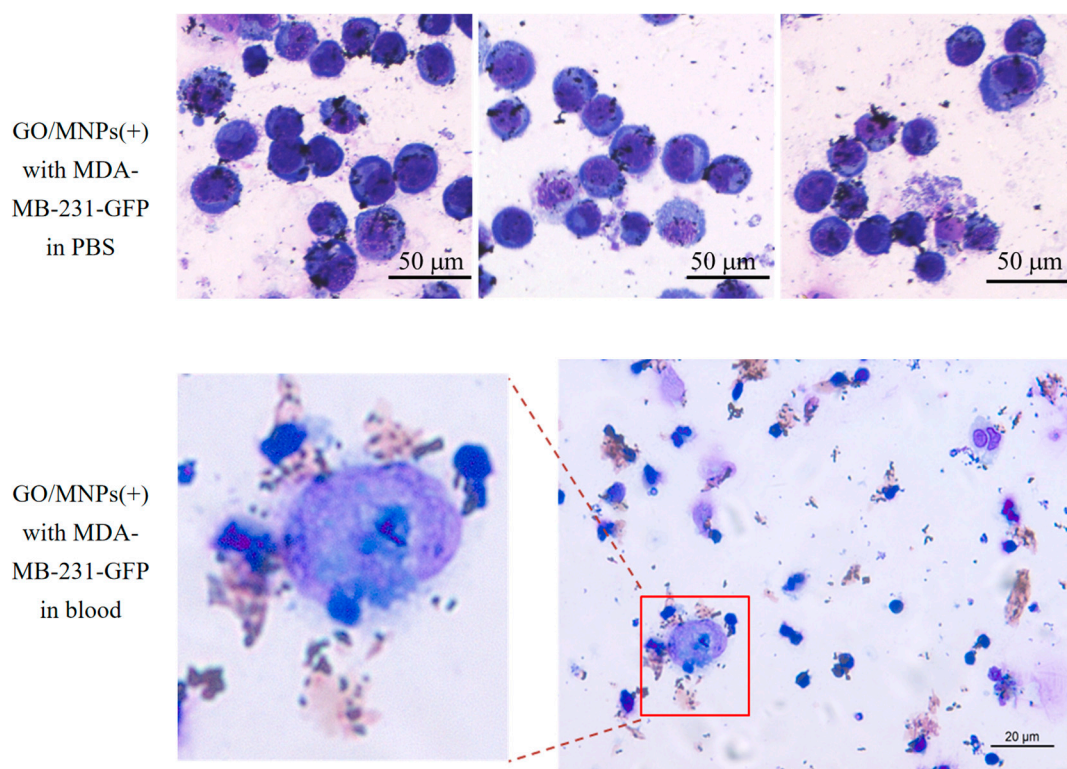
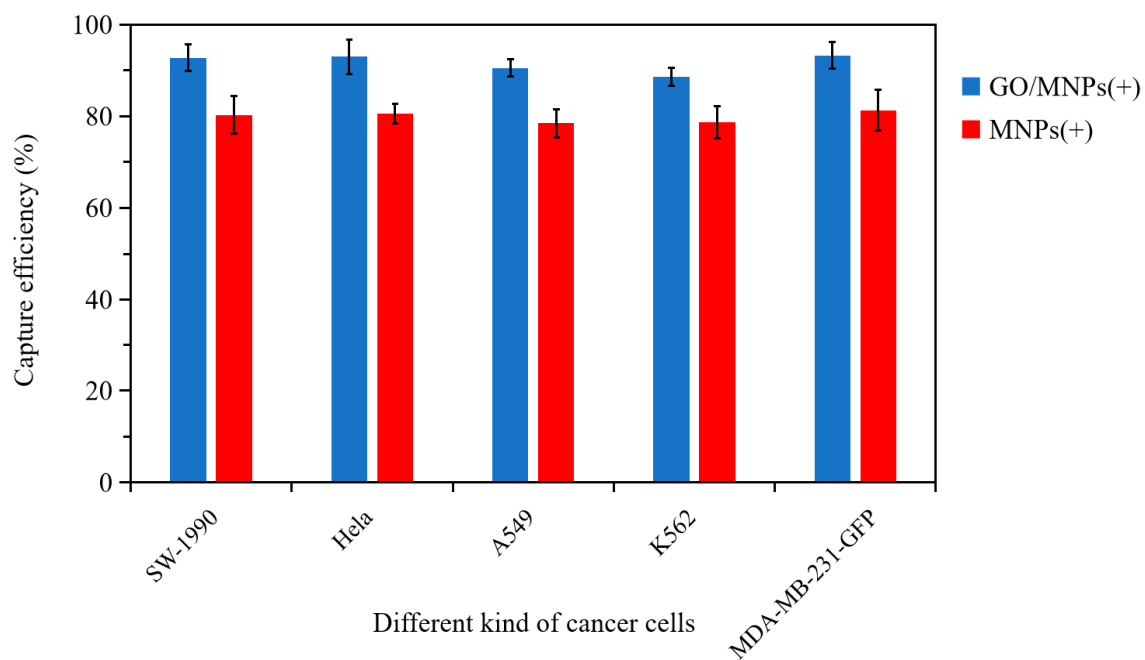


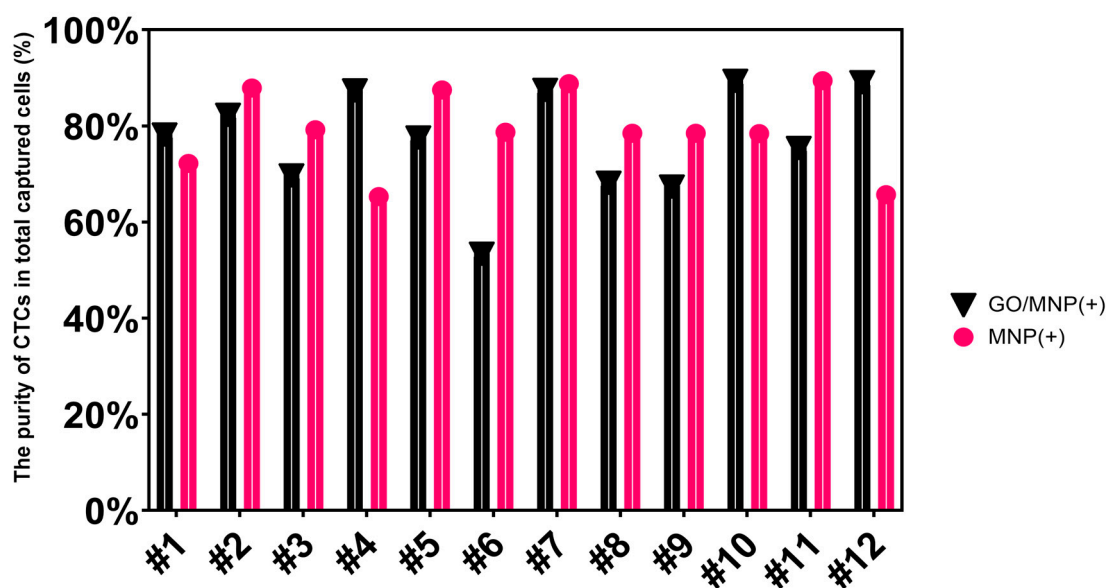
Supplementary Figure S1. The size distribution of MNPs(+) nanoprobe.



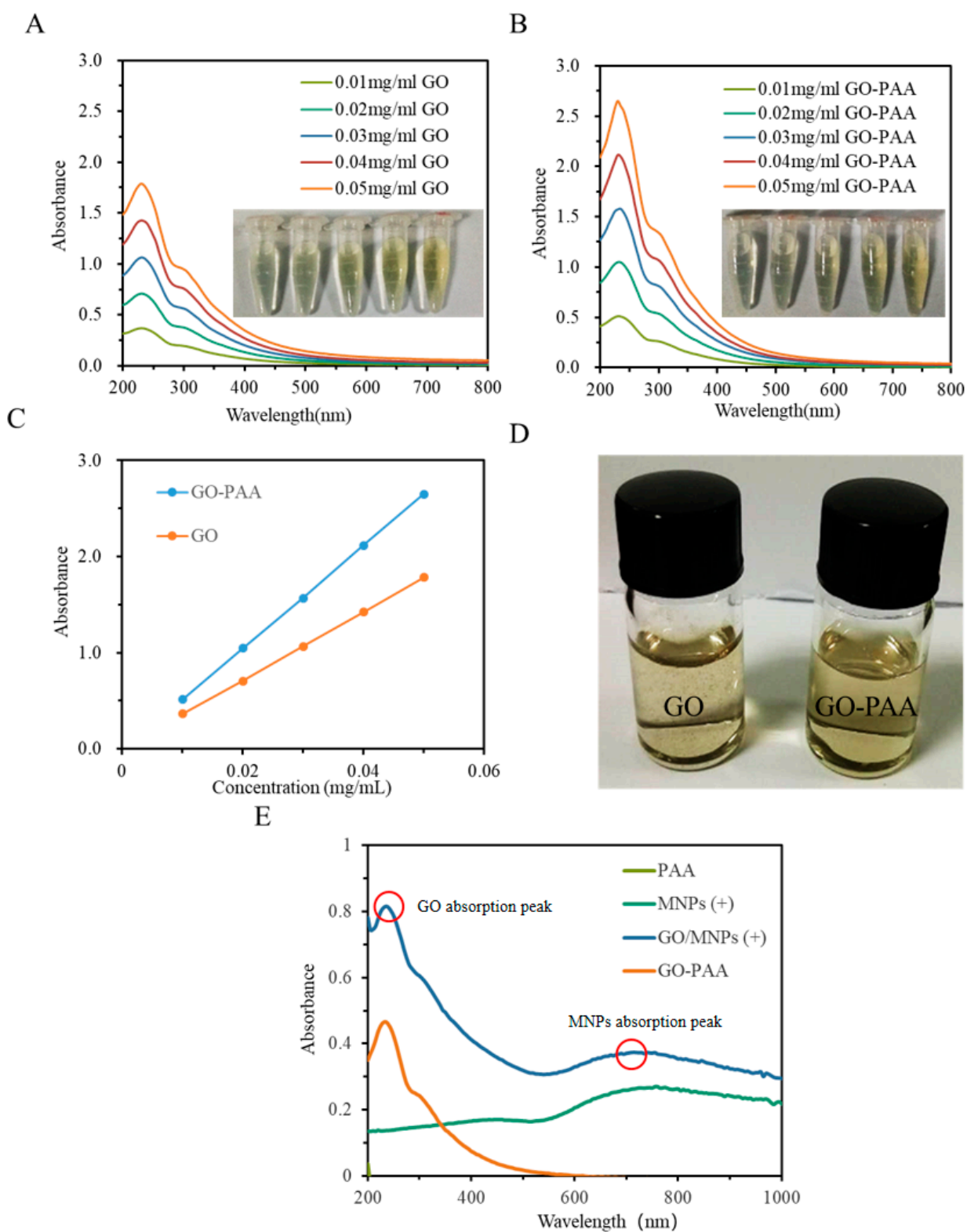
Supplementary Figure S2. The microscopic observation of the specific targeting of GO/MNPs(+) to MDA-MB-231-GFP cells in PBS or blood samples.



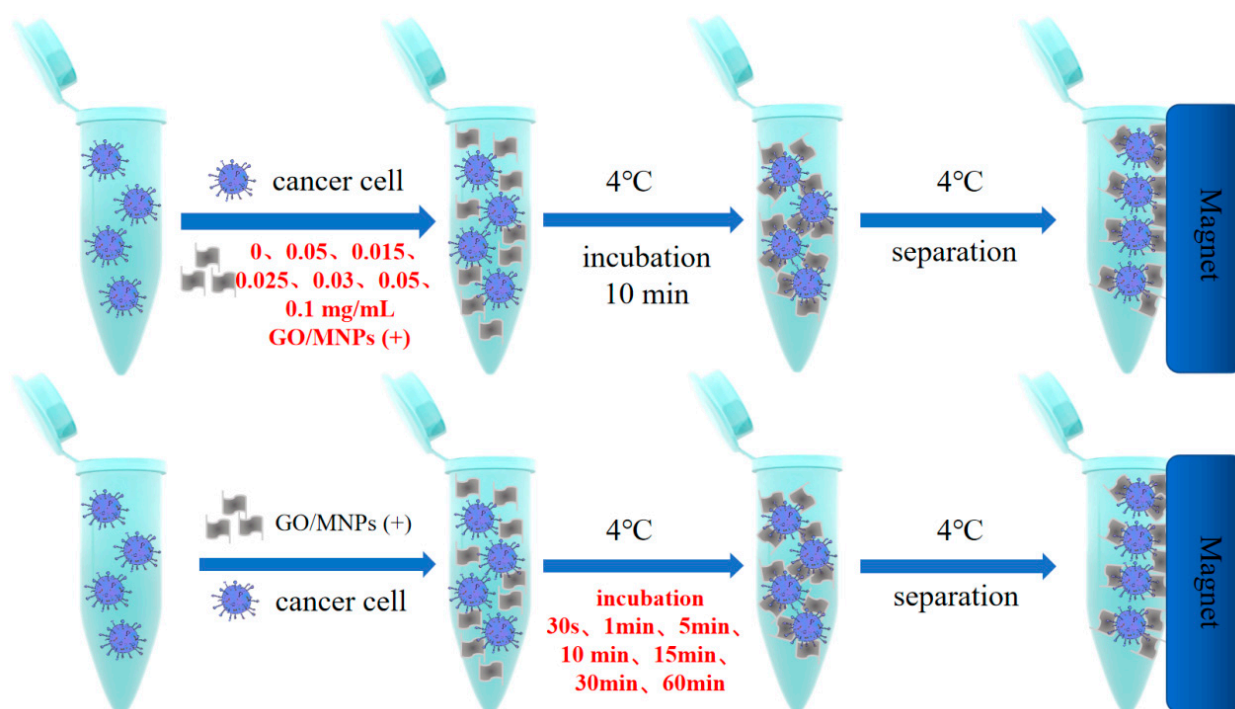
Supplementary Figure S3. Broad-spectrum assay of GO/MNPs(+) and MNPs(+) on five different types of cancer cells.



Supplementary Figure S4. The purity of CTCs in total captured cells in clinical samples.



Supplementary Figure S5. UV-Vis absorption spectra of (A) GO and (B) GO-PAA; (C) the curve of the relationship between absorbance and concentration at 230 nm in GO and GO-PAA; (D) dispersion of GO and GO-PAA in water for 15 days; (E) UV-Vis absorption spectra of GO-PAA, PAA, MNPs(+), GO/MNPs(+).



Supplementary Figure S6. Schematic of the optimal conditions for the separation of cancer cells using GO/MNP(+) nanoprobes.

Table S1. Information of clinical samples.

Patient ID	Sex	Clinical Diagnosis
#1	F	Breast cancer
#2	M	Colon cancer
#3	M	Liver cancer
#4	M	Nasopharyngeal cacinoma
#5	M	Melanoma
#6	M	Hepatobiliary cacinoma
#7	F	Nasopharyngeal cacinoma
#8	M	Hepatic metastasis of pancreatic cancer
#9	M	Lung cancer
#10	F	Lung cancer
#11	F	Pancreatic cancer
#12	F	Hepatobiliary cacinoma