Supporting information for

Simultaneous single-cell phenotype analysis of hepatocellular carcinoma CTCs using SERS-aptamer based microfluidic chip

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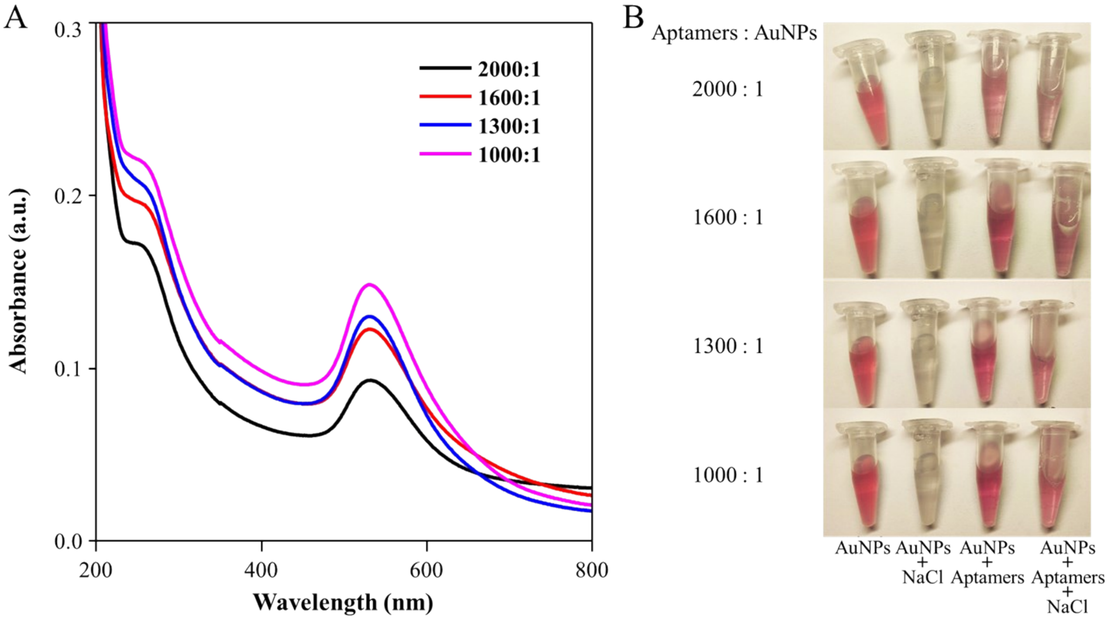

Figure S1. The UV-Vis spectra (A) and photographs (B) of various mixing ratios of aptamers and AuNPs.

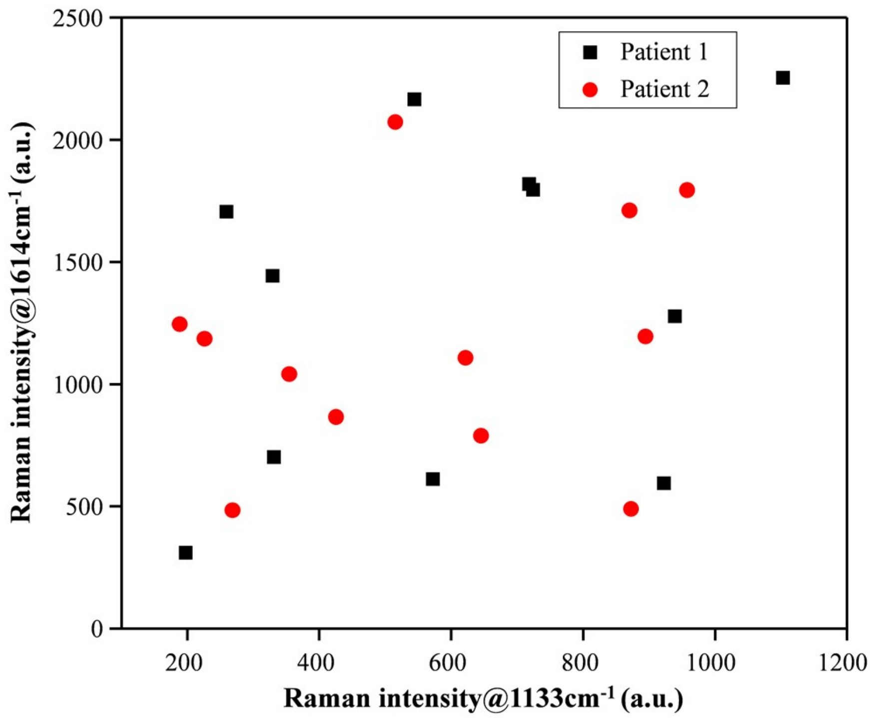

Figure S2. The single-cell phenotype analysis of two clinical specimens from HCC patients.

Table S1. Micro/nanofluidic technologies for the isolation of CTCs

Approach	Target cell line	Efficiency	Throughput	Ref.
Size filtration	MDA-MB-231, MCF7, SKBR3	87 ± 8%	1 μL min^{-1}	1
	A549, SK-MES-1, and H446 cells	90%	0.4 mL h^{-1}	2
	SK-HEP-1, HepG2	84%	20 μL min^{-1}	Our work
Aptamer-based isolation	CEM	~95%	600 nL s^{-1}	3
	SW480	86.7%-89.4%	1 mL h^{-1}	4
Antibody-based isolation	SK-HEP-1，HuH-7	85%, 89%	0.6 mL h^{-1}	5
Dean flow fractionation	MCF-7, T24, MDA-MB-231	>80%	0.9 mL min^{-1}	6
	MCF-7	91.5% ± 0.9%	2.5 mL min^{-1}	7
Immunomagnetic	MCF-7, SKBR3, MDA-MB-231, PC3	~90%	>3 mL h^{-1}	8
Deterministic lateral displacement	SW480	92.2±6.4%	1 mL h^{-1}	9

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