Supplementary Information

Label-Free Isolation of Rare Tumor Cells from Untreated Whole Blood by Interfacial Viscoelastic Microfluidics

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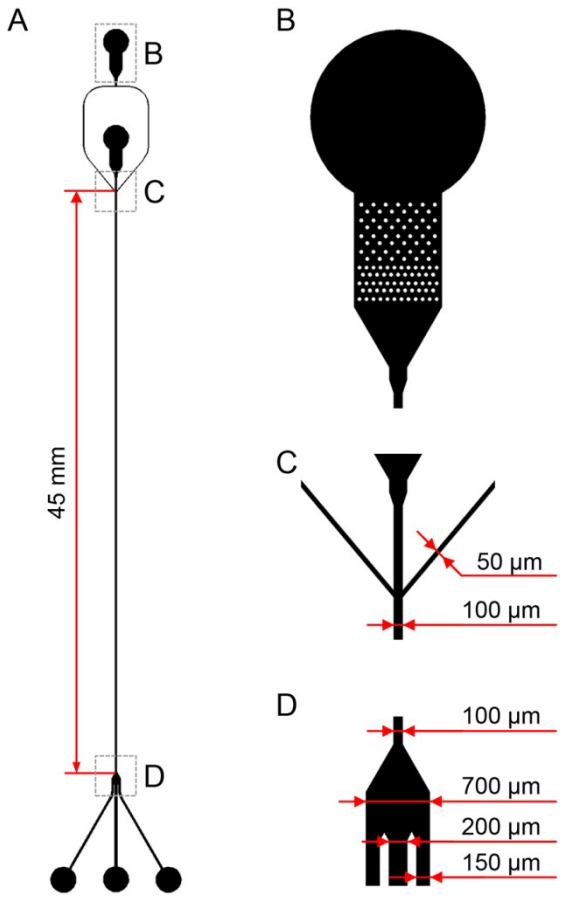

Figure S1. (A) CAD design showing that the co-flow microfluidic device consists of a separation section that is 45 mm long and 100 μm wide, (B, C) two inlets with debris filters for core and sample fluids, respectively, and (D) three outlets for tumor cells (one center outlet with a width of 250 μm) and blood cells (two side outlets with a width of 150 μm), respectively. The entire microchannel has a uniform depth of 50 μm.

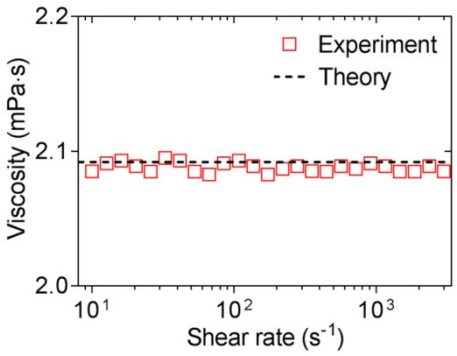

Figure S2. Rheological measurement (markers) and theoretical calculation (dashed line) of shear viscosities of 0.005 % PEO solution.

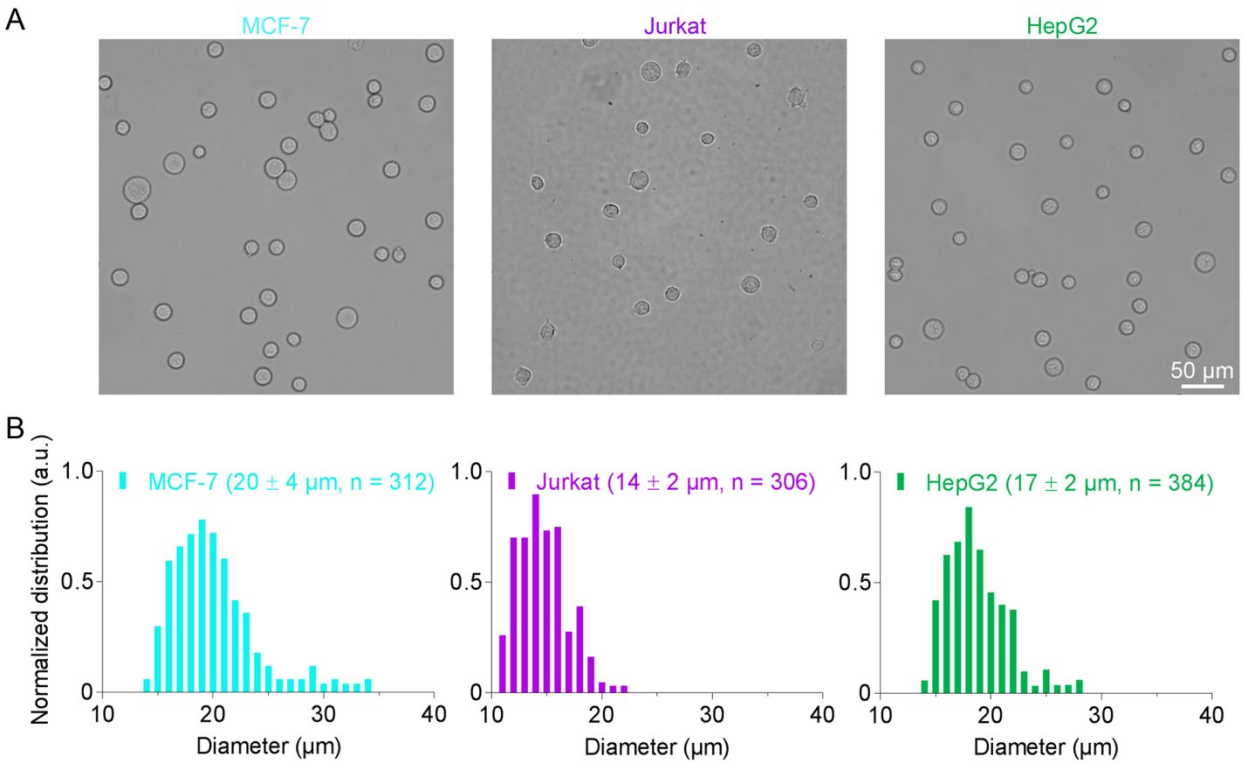

Figure S3. (A) Representative bright-field images and (B) size distributions (mean ± s.d.) of MCF-7, Jurkat, and HepG2 cells.

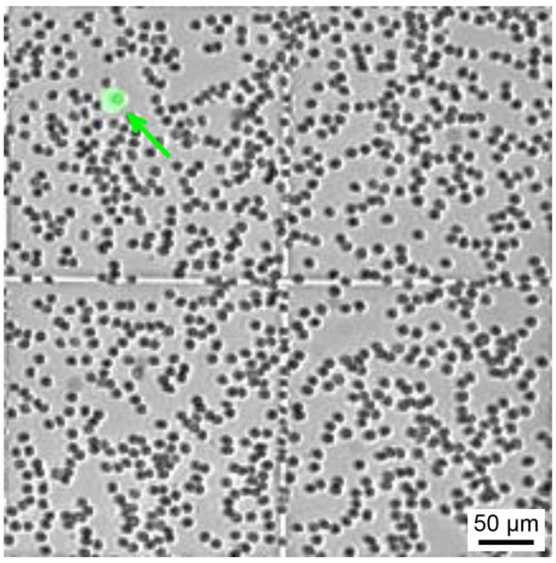

Figure S4. Cell counting by hemocytometer after microfluidic separation of whole blood spiked with HepG2 cells (green, initially spiked at a concentration of 50 cells mL^{-1}).