

**Supporting Information**

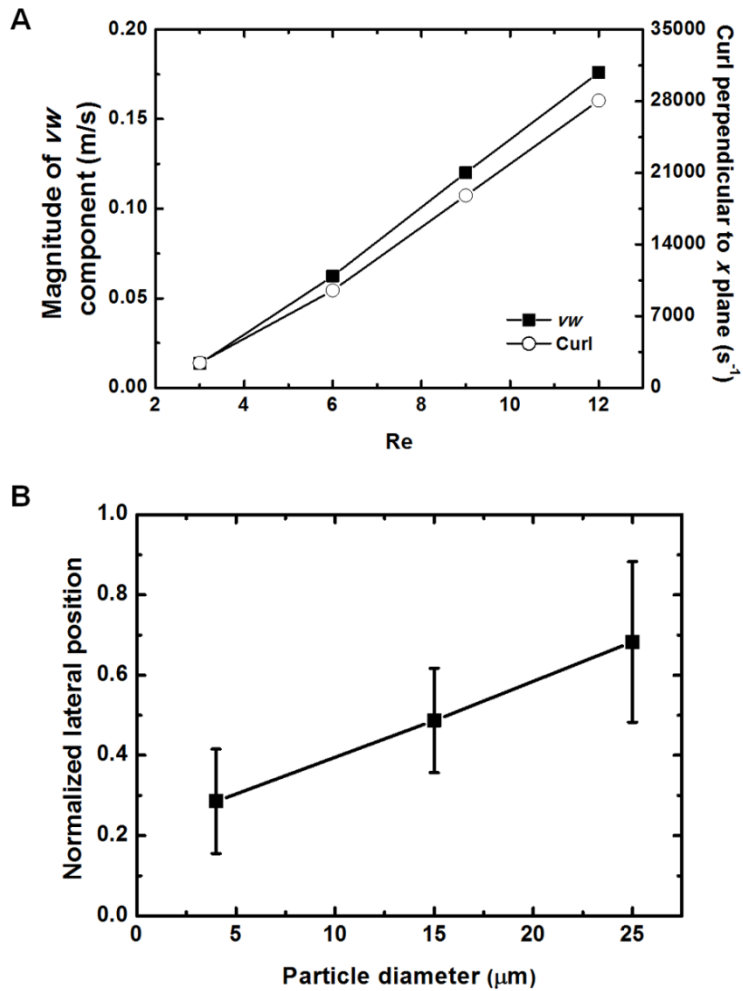
**Inertia-activated cell sorting of immune-specifically  
labeled cells in a microfluidic device**

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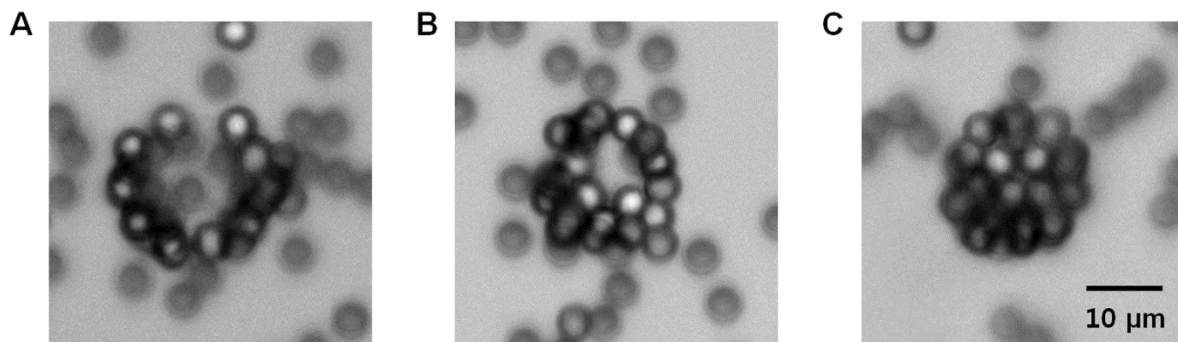
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**Fig. S1** A) The magnitude of  $v_w$  (transverse velocity component) and the absolute value of maximum curl (rotation of the vortex) values at 30  $\mu m$  inward the entrance of the second contraction region plotted with respect to Re values. B) Normalized lateral positions versus particle diameter obtained by plotting the lateral positions of 4, 15 and 25  $\mu m$  beads at Re = 12. Linear fit results in an equation  $y = 0.21 + 0.0188x$ , which translates to 13.3  $\mu m$  difference in lateral position per 1  $\mu m$  difference in particle diameter



**Fig. S2** Pictures of A) poorly labeled MCF-7 cell, B) bead-covered MCF-7 cell showing uncovered spot, and C) well covered MCF-7 cell. All pictures were taken from the same incubation batch to show that there is variation in coverage.