Electronic Supplementary Information (ESI)

Role of micropillar array in cell rolling dynamics

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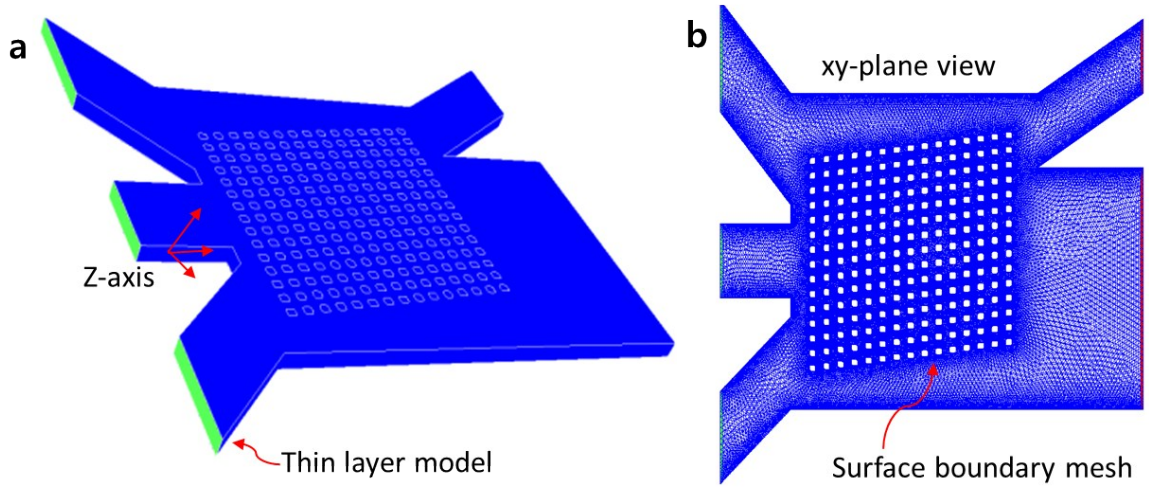

Figure S1. Modeling of the cell sorting system for numerical fluidic flow analysis (a) 3D rendering model of the proposed microfluidic channel and (b) grid formation of the cell sorting system (Top-down view)

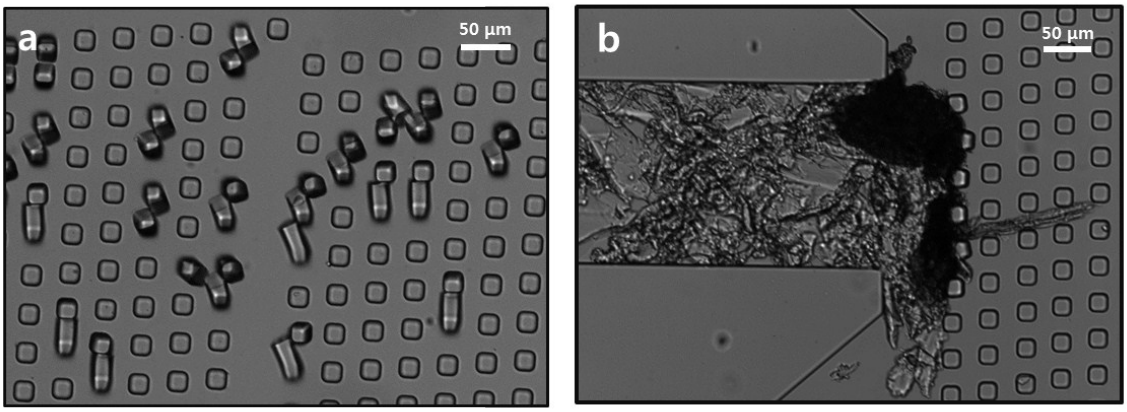

Figure S2. Chip failure modes during cell sorting experiments (a) Optical image of collapsed micropost by mechanical stress during the microfluidic chip fabrication. (b) Optical image of clogged channel inlet by particles after sample injection.

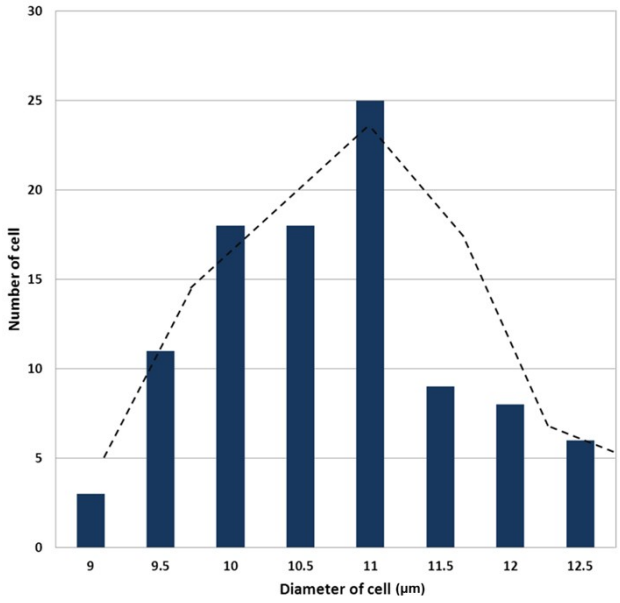

Figure S3. Distribution graph of HL-60 cell's diameters measured by Image J. The average diameter of the 100 cells was 10.687 µm.

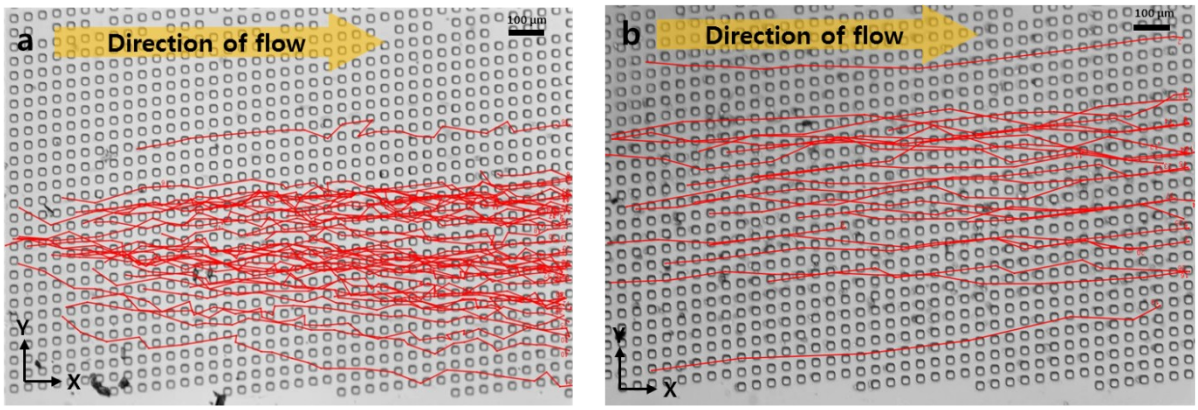

Figure S4. The analysis result of the cell paths (a) Trajectories of HL60 cells in a 1% BSA coated microfluidic channel (b) Trajectories of HL60 cells in P-selectin-coated channels.