

Supplementary Material (ESI) for Lab on a Chip  
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## **Three-dimensional hydrodynamic focusing with a single sheath flow in a single-layer microfluidic device**

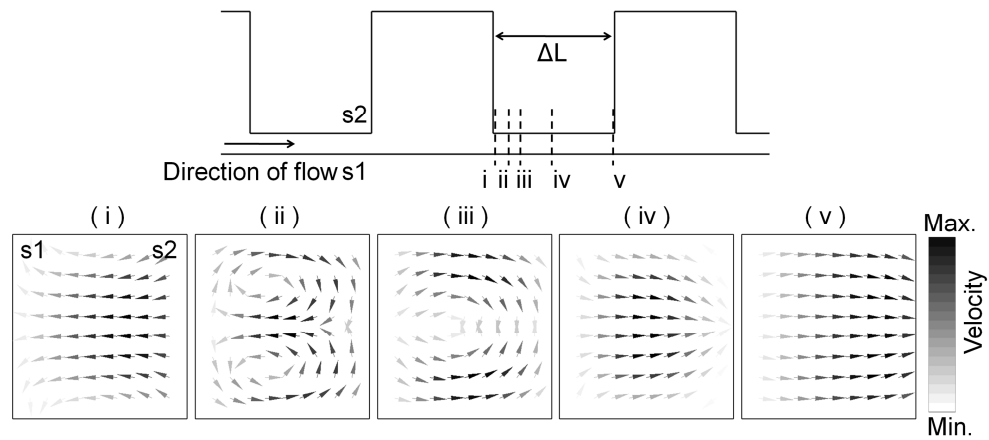
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**Fig. S1.** Simulation results of cross-sectional view of transverse velocity vectors at  $x$ -axial position of 5 (i), 35 (ii), 65 (iii), 155 (iv) and 295 (v)  $\mu\text{m}$  from an entrance of the second contraction region. Two counter-rotating vortices representing Dean flow are completely developed around  $x$ -axial position of 35  $\mu\text{m}$ .