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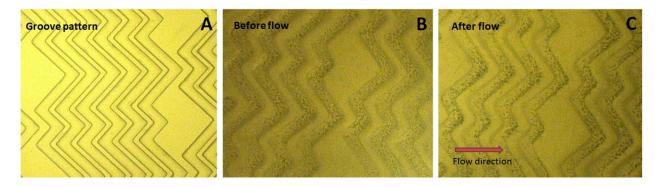


Fig. S1. (A) typical microscope image of groove HB pattern, (B) MPs stabilized in groove HB pattern device and (C) MPs subjected to flow in groove HB pattern device.

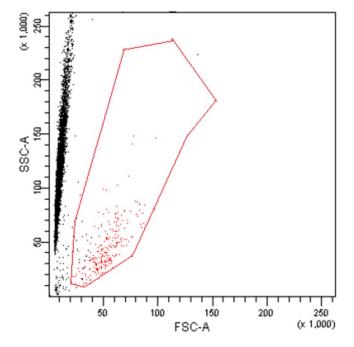


Fig. S2. Flow cytometry results to show the selectivity of the CTC capture device. The events (red dots) showed the pre-stained tumor cells. Other events (black dots) that happened in the same range as the tumor cells outlined by red lines were counted, and these events were treated as impurities, which might include white blood cells, macrophages, and MPs clusters. The purity or selectivity was obtained by

 $Selectivity = \frac{\textit{\# of captured tumor cells}}{\textit{\# of captured tumor cells} + \textit{\# of impurities}}$