Electronic Supplementary Material (ESI) for Lab on a Chip.

Supplementary Information

Multiplex recreation of human intestinal morphogenesis on multi-well inserts platform by basolateral convective flow†

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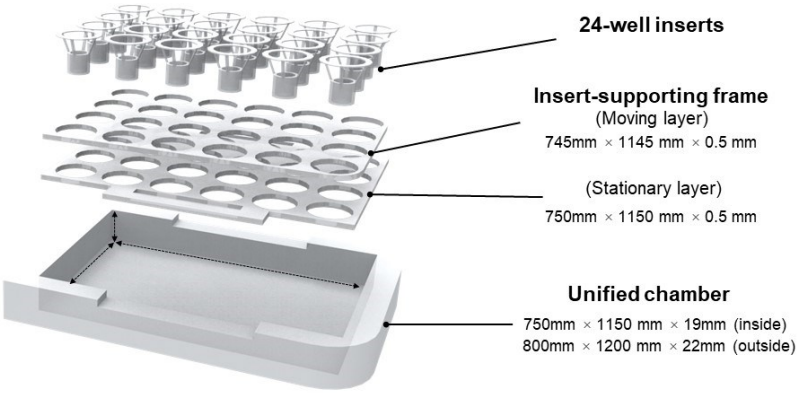

Fig. S1 Dimension details of BASIN.

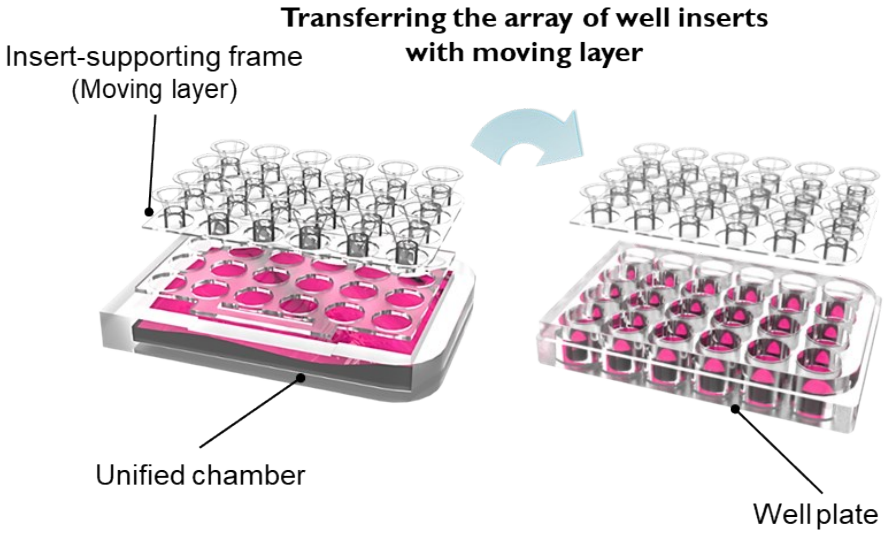

Fig. S2 The moving layer of the insert-supporting frame allowed the easy transferring of well inserts from the unified chamber of BASIN to the conventional well plate.

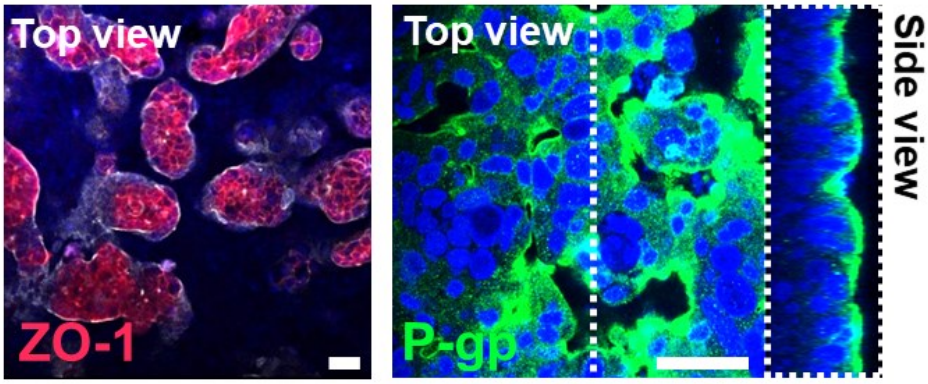

Fig. S3 Immunofluorescence images of Caco-2 intestinal epithelium in BASIN stained with ZO-1 (red) and P-gp (green). (Scale bar: 50 μm)

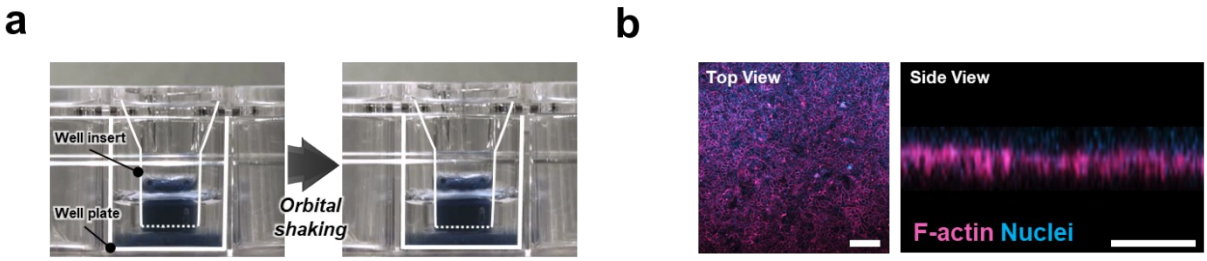

Fig. S4 (a) Dye dispersion test on the 24-well plate of conventional Transwell system with orbital shaking. (b) Immunofluorescence images of Caco-2 intestinal epithelium cultured on orbitally shaken 24-well plate. The cells were stained with F-actin (magenta) and nuclei (cyan) (Scale bar: 50 μm).

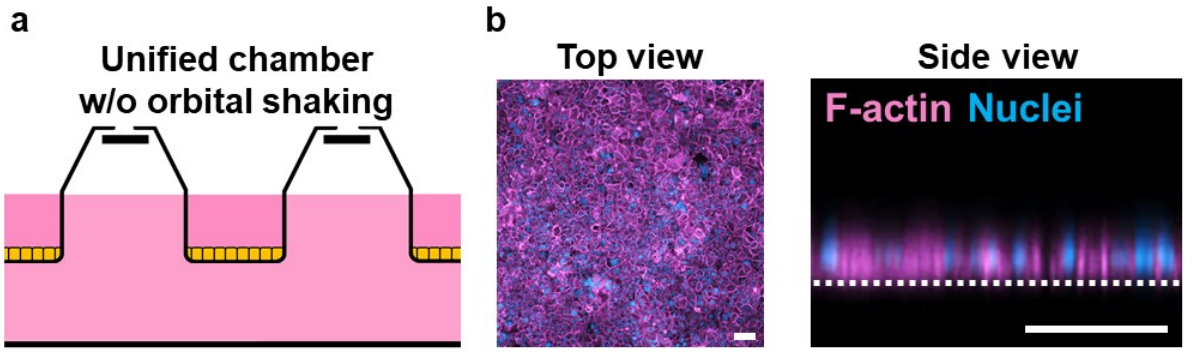

Fig. S5 (a) Schematic illustration of the static culture condition of Caco-2 cells in the unified chamber without orbital shaking. (b) Immunofluorescence images of Caco-2 intestinal epithelium cultured in the unified chamber without orbital shaking stained with DAPI (blue) and Phalloidin (Magenta). (Scale bar: 50 μm).

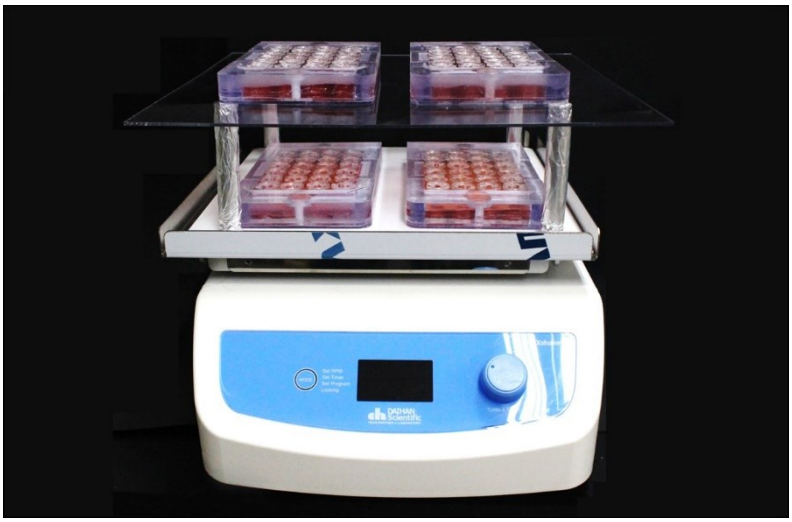

Fig. S6 Stackable design of BASIN allowing the scale-up of the platform.

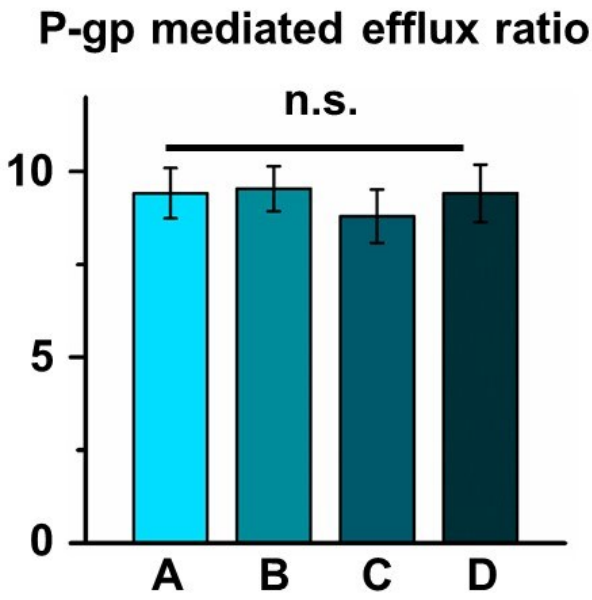

Fig. S7 P-gp mediated efflux ratio of Caco-2 intestinal epithelium cultured on BASIN calculated by dividing P_{app_b} with P_{app_a} of Rhodamine 123.