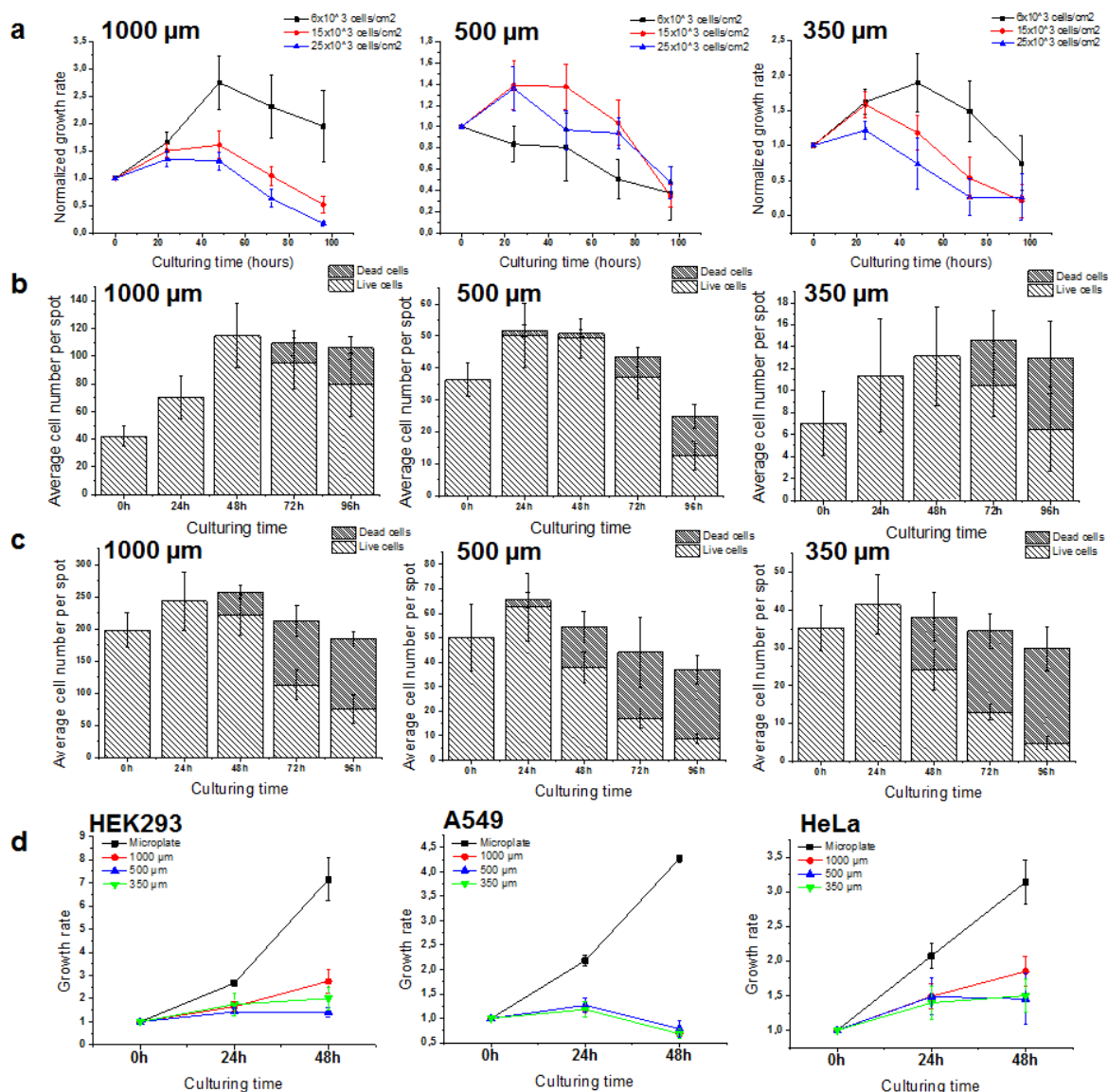


Supplementary figures

Droplet-Microarray on Superhydrophobic-superhydrophilic Patterns for High-throughput Live Cell Screenings

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HEK293	24h	48h
Microplate	98%	97%
1000 mm	100%	100%
500 μm	97%	96%
350 μm	100%	97%

A549	24h	48h
Microplate	97%	96%
1000 mm	98%	64%
500 μm	96%	67%
350 μm	99%	64%

HeLa	24h	48h
Microplate	99%	98%
1000 mm	97%	94%
500 μm	96%	77%
350 μm	97%	84%

Fig. S1. Growth rate and viability of HEK293, A549 and HeLa cells cultured using Droplet-Microarrays with different spot sizes with and without exchange of the medium. (a) Growth rates of HEK293 cells depending on the initial cell density (cell number per cm^2). (b-c) Growth rate and viability of HEK293 (b) and A549 (c) cells cultured in individual droplets of different sizes for 5 days. (d) Comparison of growth rates of HEK293 (left), A549 (middle) and HeLa (right) on Droplet-Microarrays with different spot sizes and in 24-well microplate. (e) Tables showing comparison of viabilities of HE293 (left), A549 (middle) and HeLa (right) cells on DMA with different spot sizes and 24-well microplate at 24 and 48 hours after seeding.

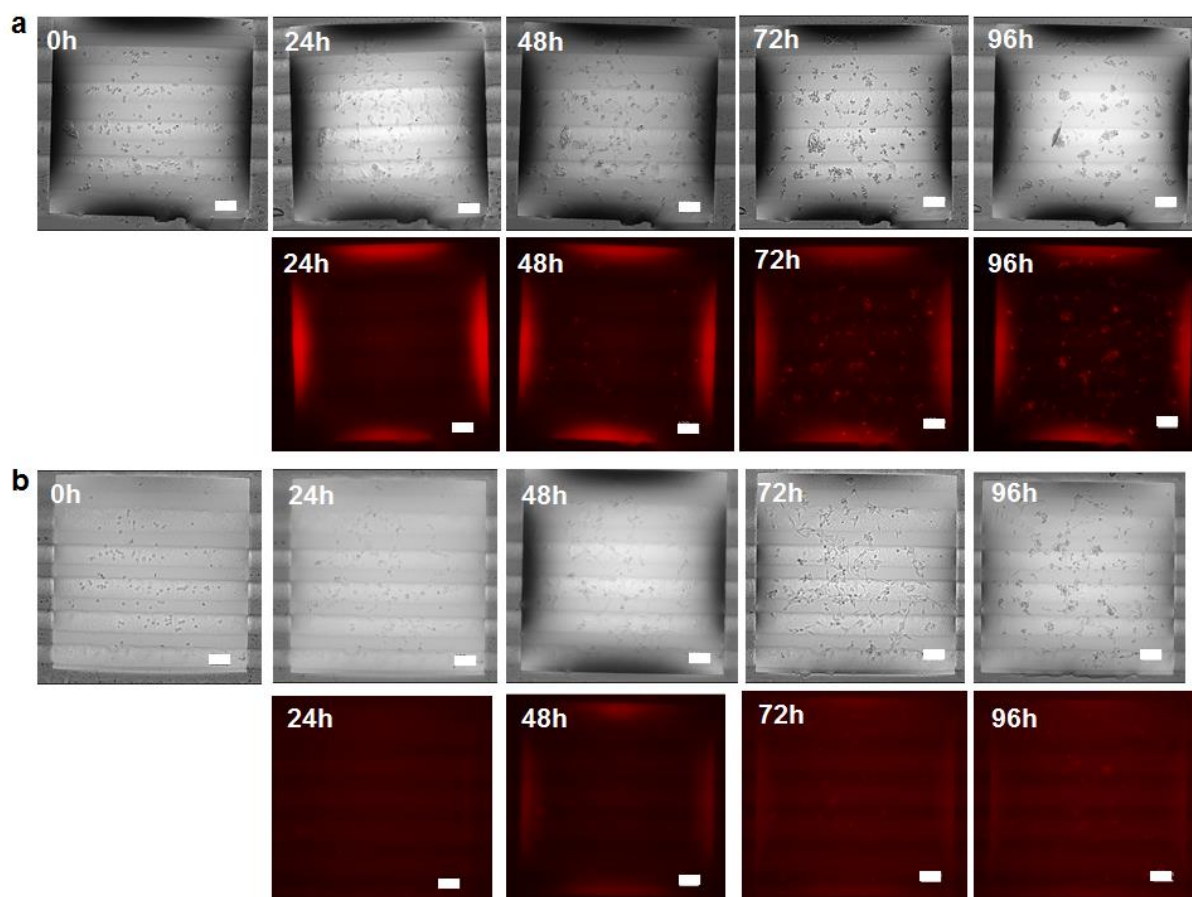


Fig. S2. Microscopic images of HeLa cells cultured on Droplet-Microarray with 1000 μm spot sizes for 5 days without (a) and with (b) medium exchange.

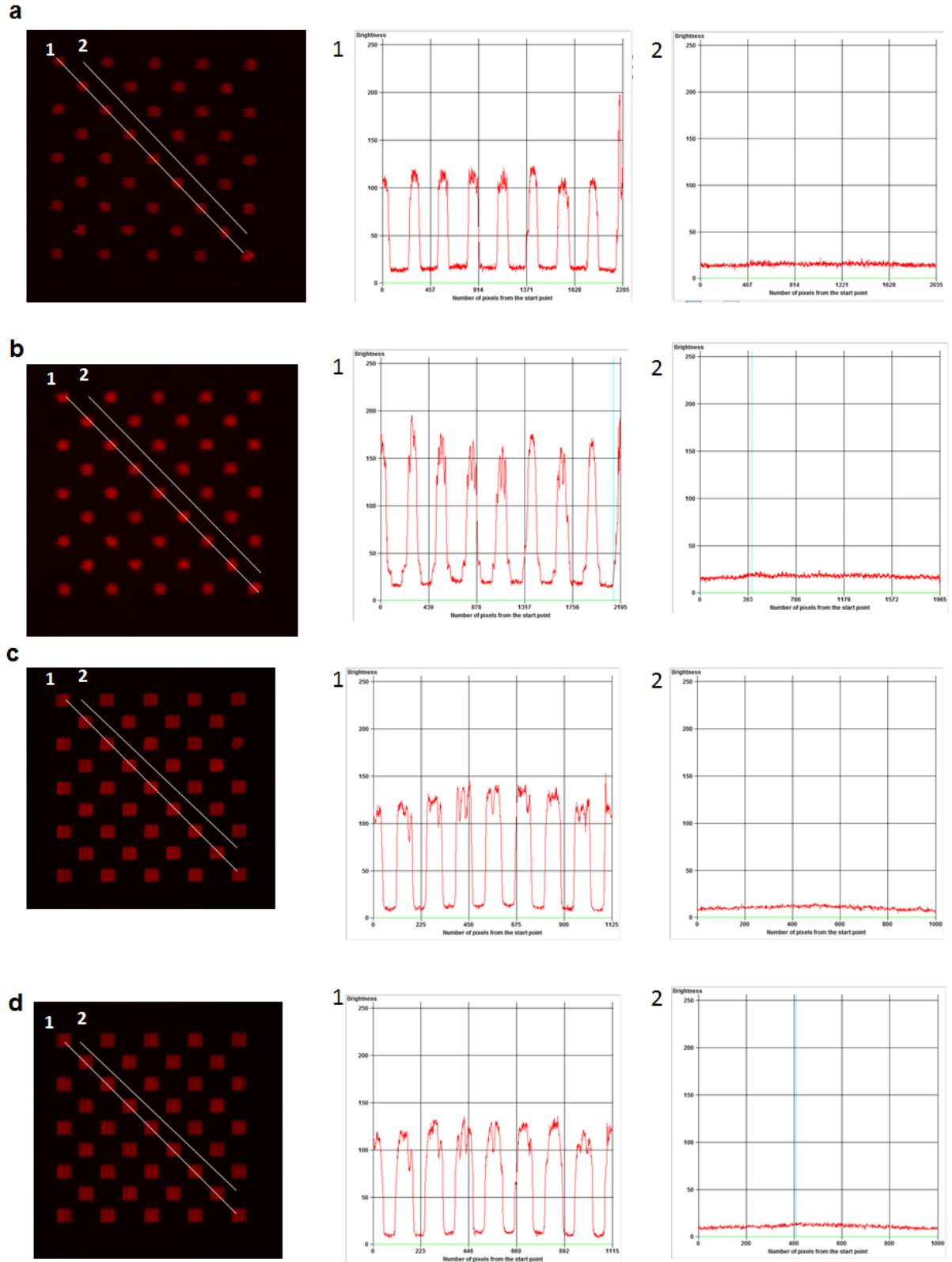


Fig. S3. Cross-contamination study. Microscopic images of DMA slides with spot sizes 1000 μm (a-b) and 500 μm (c-d) containing pre-printed doxorubicin in water solution (red) and fluorescence line profile of lines 1 and 2 indicated on the corresponding microscope image before DMA formation (a and c) and after DMA formation (b and d). Scale bar, 500 μm .