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

Supporting Information

In situ differentiation and generation of functional liver organoids from human iPSCs in a 3D perfusable chip system

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The authors have no conflicts of interest to declare.

Table S1: Primer pairs used to examine mRNA expression of specific genes during the differentiation and formation of liver organoids.

Primer	Forward sequence (5′→3′)	Reverse sequence (5′→ 3′)
OCT4	GGAGAAGCTGGAGCAAAACC	TGGCTGAATACCTTCCCAAA
NANOG	GATTTGTGGGCCTGAAGAAA	CTTTGGGACTGGTGGAAGAA
SOX17	GTGGACCGCACGGAATTTG	GGAGATTCACACCGGAGTCA
FOXA2	CGACTGGAGCAGCTACTATGC	TACGTGTTCATGCCGTTCAT
AFP	CTTTGGGCTGCTCGCTATGA	GCATGTTGATTTAACAAGCTGCT
ALB	GCCTTTGCTCAGTATCTT	AGGTTTGGGTTGTCATCT
CYP3A4	TTCAGCAAGAAGAACAAGGACAA	GGTTGAAGAAGTCCTCCTAAGC
CYP2B6	GCACTCCTCACAGGACTCTTG	CCCAGGTGTACCGTGAAGAC
CYP2C9	GCCTGAAACCCATAGTGGTG	GGGGCTGCTCAAAATCTTGATG
PXR	AAGCCCAGTGTCAACGCAG	GGGTCTTCCGGGTGATCTC
CK7	AAGAACCAGCGTGCCAAGTT	CACGCTCATGAGTTCCTGGT
CK19	TCCGAACCAAGTTTGAGACG	CCCTCAGCGTACTGATTTCCT
CFTR	CTGGAATCTGAAGGCAGGAG	GGCATTTCCACCTTCTGTGT
β-Actin	AAATCTGGCACCACACCTTC	AGAGGCGTACAGGGATAGCA

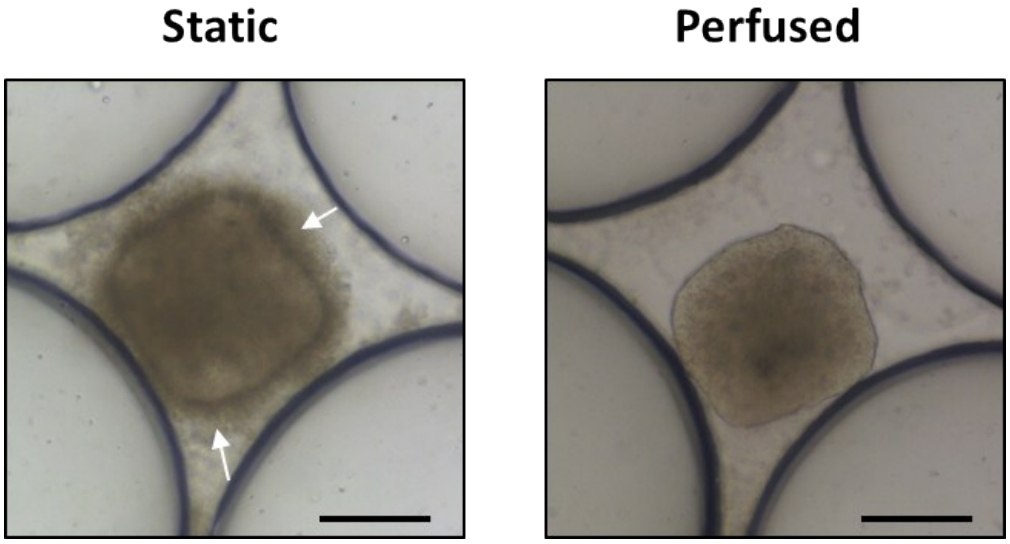

Fig. S1 Characterization of EBs formation from hiPSCs on the micropillar chip under different culture conditions. The representative microscopic images of the EBs formation from hiPSCs were obtained under static and perfused culture conditions on day 1. The observed cell debris surrounding the EBs (indicated by arrows) could be easily removed under perfused conditions. Scale bars: 200 μm.