

Materials List for:

A Microfluidic Platform for High-throughput Single-cell Isolation and Culture

Ching-Hui Lin^{1,2}, Hao-Chen Chang^{1,2}, Chia-Hsien Hsu^{1,2,3}

¹Institute of Biomedical Engineering and Nanomedicine, National Health Research Institutes, Taiwan

²Tissue Engineering and Regenerative Medicine, National Chung Hsing University

³Institute of NanoEngineering and MicroSystems, National Tsing Hua University

Correspondence to: Chia-Hsien Hsu at chsu@nhri.org.tw

URL: <https://www.jove.com/video/54105>

DOI: [doi:10.3791/54105](https://doi.org/10.3791/54105)

Materials

Name	Company	Catalog Number	Comments
AutoCAD software	Autodesk	AutoCAD LT 2011	Part No. 057C1-74A111-1001
Silicon wafer	Eltech corporation	SPE0039	
Conventional oven	YEONG-SHIN company	ovp45	
Plasma cleaner	Nordson	AP-300	Bench-Top Plasma Treatment System
SU-8 50 negative photoresist	MicroChem	Y131269	
SU-8 100 negative photoresist	MicroChem	Y131273	
Spin coater	Synrex Co., Ltd.	SC-HMI 2" ~ 6"	
Hotplate	YOTEC company	YS-300S	
Msak aligner	Deya Optronic CO.	A1K-5-MDA	
SU-8 developer	Grand Chemical Companies	GP5002-000000-72GC	Propylene glycol monomethyl ether acetate
Scanning laser profilometer	KEYENCE	VK-X 100	
Trichlorosilane	Gelest, Inc	SIT8174.0	Tridecafluoro-1,1,2,2-tetrahydrooctyl. Hazardous. Corrosive to the respiratory tract, reacts violently with water.
Desiccator	Bel-Art Products	F42020-0000	Space saver vacuum desiccator 190 mm white base
Polydimethylsiloxane (PDMS) kit	Dow corning	Sylgard 184	
Harris Uni-Core puncher	Ted Pella Inc.	15072	with 0.75 mm inner-diameter
Removable tape	3M Company	Scotch Removable Tape 811	
Stereomicroscope	Leica Microsystems	Leica E24	
Bovine serum albumin (BSA)	Bersing Technology	ALB001.500	
DMEM basal medium	Gibco	12800-017	
Fetal bovine serum	Thermo Hyclone	SH30071.03HI	
Antibiotics	Biowest	L0014-100	Glutamine-Penicillin-Streptomycin
Recombinant enzyme mixture	Innovative cell technology	AM-105	Accumax
DilC12(3) cell membrane dye	BD Biosciences	354218	Used as a cell tracker
Syringe pump	Harvard Apparatus	703007	
Plastic syringe (1 ml)	BD Biosciences	309659	
23 gauge blunt needles	Ever Sharp Technology, Inc.	TD21	
Poly-tetrafluoroethene (PTFE) tubing	Ever Sharp Technology, Inc.	TFT-23T	inner diameter, 0.51 mm; outer diameter, 0.82 mm