

Materials List for:

Establishing Single-Cell Based Co-Cultures in a Deterministic Manner with a Microfluidic Chip

Cheng-Kun He^{1,2}, Ya-Wen Chen³, Ssu-Han Wang³, Chia-Hsien Hsu^{1,2}

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

²Ph.D. Program in Tissue Engineering and Regenerative Medicine, National Chung Hsing University

³National Institute of Cancer Research, National Health Research Institutes

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

URL: <https://www.jove.com/video/60202>

DOI: [doi:10.3791/60202](https://doi.org/10.3791/60202)

Materials

Name	Company	Catalog Number	Comments
3M Advanced Polyolefin Diagnostic Microfluidic Medical Tape	3M Company	9795R	
Antibiotics	Biowest	L0014-100	Glutamine-Penicillin-Streptomycin
AutoCAD software	Autodesk	AutoCAD LT 2011	Part No. 057C1-74A111-1001
CellTracke Blue CMAC Dye	Invitrogen	C2110	
CellTracker Green CMFDA Dye	Invitrogen	C7025	
Conventional oven	YEONG-SHIN company	ovp45	
Desiccator	Bel-Art Products	F42020-0000	Space saver vacuum desiccator 190 mm white base
DilC12(3) cell membrane dye	BD Biosciences	354218	Used as a cell tracker
DMEM-F12 medium	Gibco	11320-082	
Endothelial Cell Growth Medium MV 2	PromoCell	C-22022	
Fetal bovine serum Hyclone	Thermo	SH30071.03HI	
Hamilton 700 series Glass syringe (0.1 ml)	Hamilton	80630	100 µL, Model 710 RN SYR, Small Removable ND, 22s ga, 2 in, point style 2
Harris Uni-Core puncher	Ted Pella Inc.	15075	with 1.5mm inner-diameter
Harris Uni-Core puncher	Ted Pella Inc.	15071	with 0.5mm inner-diameter
Hotplate	YOTEC company	YS-300S	
Msak aligner	Deya Optronic CO.	A1K-5-MDA	
Oxygen plasma	NORDSON MARCH	AP-300	
Plasma cleaner	Nordson	AP-300	Bench-Top Plasma Treatment System
Polydimethylsiloxane (PDMS) kit	Dow corning	Sylgard 184	
Poly-tetrafluoroethene (PTFE)	Ever Sharp Technology, Inc.	TFT-23T	inner diameter, 0.51 mm; outer diameter, 0.82 mm
Removable tape	3M Company	Scotch Removable Tape 811	
Silicon wafer	Eltech cooperation	SPE0039	
Spin coater	Synrex Co., Ltd.	SC-HMI 2" ~ 6"	
Stereomicroscope	Leica Microsystems	Leica E24	
SU-8 10 negative photoresist	MicroChem	Y131259	
SU-8 2 negative photoresist	MicroChem	Y131240	
SU-8 2050 negative photoresist	MicroChem	Y111072	

SU-8 developer	Grand Chemical Companies	GP5002-000000-72GC	Propylene glycol monomethyl ether acetate
Syringe pump	Harvard Apparatus	703007	
Trichlorosilane	Gelest, Inc	SIT8174.0	Tridecafluoro-1,1,2,2-tetrahydrooctyl. Hazardous. Corrosive to the respiratory tract, reacts violently with water.
Trypsin Neutralizer Solution	Gibco	R-002-100	