

Materials List for:

Ordering Single Cells and Single Embryos in 3D Confinement: A New Device for High Content Screening

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URL: <https://www.jove.com/video/51880>

DOI: [doi:10.3791/51880](https://doi.org/10.3791/51880)

Materials

Name	Company	Catalog Number	Comments
ddH ₂ O (ultrapure)	Millipore	-	Use always fresh water.
Parafilm (plastic film)	Bemis	PM-999	Adhere Parafilm to the lab bench using some water droplets and ensure a perfect surface flatness.
Photo-mask	Selba	-	http://www.selba.ch
Silicon wafer	Siltronix	-	http://www.siltronix.com/
SU-8 photoresist	MicroChem	2000 series	http://www.microchem.com/Prod-SU82000.htm
working in a fumehood is required; check the data sheet from the manufacturer for more information.			
SU-8 developer	MicroChem	-	http://microchem.com/Prod-Ancillaries.htm
working in a fumehood is required; check the data sheet from the manufacturer for more information			
2-propanol	Sigma-Aldrich	19030	http://www.sigmaaldrich.com/catalog/product/sial/i9030?lang=en&region=CA
Available from multiple companies.			
Sigmacote (siliconizing reagent)	Sigma-Aldrich	SL2-25ML	http://www.sigmaaldrich.com/catalog/product/sigma/sl2?lang=fr&region=FR
harmful, working in a fumehood is required; check the data sheet from the manufacturer for more information.			
Chlorotrimethylsilane (TMCS)	Sigma-Aldrich	386529-100ML	http://www.sigmaaldrich.com/catalog/product/aldrich/386529?lang=fr&region=FR
TMCS produces acute inhalation and dermal toxicity, and is highly flammable (with ignition flashback able to occur across considerable distances), consequently it should be used in a fume cupboard away from sources of ignition			
Nitrile gloves	Kleenguard	57372	http://www.kcprofessional.com/products/ppe/hand-gloves/thin-mil-/57372-kleenguard-g10-blue-nitrile-gloves-m
Available from multiple companies.			
Glass coverslips #0	Knittel glass	KN00010022593	http://www.knittelglass.com/index_e.htm
Very fragile. Manipulate gently.			

Sharp straight tweezers	SPI	0WSSS-XD	http://www.2spi.com/catalog/tweezers/t/elec7
50 ml tube	BD Falcon	352070	http://www.bdbiosciences.com/cellculture/tubes/features/index.jsp
Available from multiple companies.			
PDMS	Dow Corning	Sylgard 184 kit	http://www.dowcorning.com/applications/search/default.aspx?R=131EN
The package contains both PDMS base and curing agent. Similar elastomers are available from multiple companies.			
Microscope glass slides	Dutscher	100001	http://www.dutscher.com/frontoffice/search
Available from multiple companies.			
DMEM high-glucose medium	Fisher Scientific	41965-039	http://www.fishersci.com/ecomm/servlet/Search?LBCID=12301479&keyWord=41965-039&store=Scientific&nav=08
Bovine calf serum	Sigma-Aldrich	C8056-500ML	http://www.sigmaaldrich.com/catalog/product/sigma/c8056?lang=en&region=CA
0.25% Trypsin-EDTA	Fisher Scientific	25200-072	http://www.fishersci.com/ecomm/servlet/Search?keyWord=25200-072&store=Scientific&nav=08
PBS 1x	Fisher Scientific	14200-067	http://www.fishersci.com/ecomm/servlet/Search?keyWord=14200-067&store=Scientific&nav=08
PBS is at 10x and should be diluted to 1x using ddH ₂ O			
L-15 medium	Fisher Scientific	21083-027	http://www.fishersci.com/ecomm/servlet/Search?keyWord=21083-027&store=Scientific&nav=08
Medium for atmospheres without CO ₂ control			
Fibronectin	Sigma-Aldrich	F1141-5MG	http://www.sigmaaldrich.com/catalog/search?interface=All&term=F1141-5MG&lang=en&region=CA&partialmax
Penicillin & Streptomycin	Fisher Scientific	15140-122	http://www.fishersci.com/ecomm/servlet/Search?keyWord=15140-122&store=Scientific&nav=08
Petri dish P35	Greiner	627102	http://www.greinerbioone.com/en/row/articles/catalogue/article/144_11/12885/
Petri dish P60	Greiner	628163	http://www.greinerbioone.com/nl/belgium/articles/catalogue/article/145_8_bl/24872/
Petri dish P94	Greiner	633179	http://www.greinerbioone.com/nl/belgium/articles/catalogue/article/146_8_bl/24882/
Paraformaldehyde 3 %	Sigma-Aldrich	P6148-500G	http://www.sigmaaldrich.com/catalog/product/sial/p6148?lang=fr&region=FR
Harmful in-particular for the eyes, working in a fumehood is required; check the data sheet from the manufacturer for more information.			

Triton 0.5 %	Sigma-Aldrich	93443-100ML	http://www.sigmaaldrich.com/catalog/search?interface=All&term=93443-100ML&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=93443-100ML&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=93443-100ML&lang=en&region=C
Phalloidin-Green Fluorescent Alexa Fluor 488	InVitrogen	A12379	http://www.lifetechnologies.com/order/catalog/product/A12379?CID=search-a12379
dissolve powder in 1.5 ml methanol			
Alexa Fluor 647	InVitrogen	A21245	1:200 dilution in PBS 1x
rabbit polyclonal anti-Giantin	Abcam	ab24586	1:500 dilution in PBS 1x
http://www.abcam.com/giantin-antibody-ab24586.html			
rabbit anti-anillin	Courtesy of M. Glotzer, Published in Piekny, A. J. & Glotzer, M. Anillin is a scaffold protein that links RhoA, actin, and myosin during cytokinesis. Current biology 18, 30–6 (2008).		1:500 dilution in PBS 1x
Anti-phosphotyrosine	Transduction Lab	610000	http://www.bdbiosciences.com/ptProduct.jsp?ccn=610000
Cy3 goat anti-rabbit	Jackson ImmunoResearch	111-166-047	http://www.jacksonimmuno.com/catalog/catpages/fab-rab.asp
1:1,000 dilution in PBS 1x			
DAPI	Sigma-Aldrich	D8417	http://www.sigmaaldrich.com/catalog/product/sigma/d8417?lang=fr&region=FR
1 mg/ml for 1 min			
Glycerol	Sigma-Aldrich	G2025	http://www.sigmaaldrich.com/catalog/search?interface=All&term=G2025&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=G2025&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=G2025&lang=en&region=C
Mineral oil	Sigma-Aldrich	M8410-500ML	http://www.sigmaaldrich.com/catalog/search?interface=All&term=M8410-500ML&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=M8410-500ML&lang=en&region=C http://www.sigmaaldrich.com/catalog/search?interface=All&term=M8410-500ML&lang=en&region=C
HeLa cells	-	-	Mammalian cells are available from many companies. See also Table 1
NIH3T3 cells	ATCC	-	Mammalian cells are available from many companies. See also Table 1
Fission yeast	-	-	For details on strains, contact the corresponding author. See also Table 1
<i>C. elegans</i> worms	-	-	For details, contact the corresponding author. See also Table 1
YES (Agar) + 5 Supplements included	MP Biomedicals	4101-732	http://www.mpbio.com/search.php?q=4101-732&s=Search
For preparation: follow instructions as given on the box			
YES (Media) + 5 Supplements included	MP Biomedicals	4101-522	http://www.mpbio.com/search.php?q=4101-522&s=Search
For preparation: follow the instructions as given on the box			
EMM (Media)	MP Biomedicals	4110-012	http://www.mpbio.com/search.php?q=4110-012&s=Search
For preparation: follow instructions as given on the box			

Filter sterilized EMM (Media) - Only for imaging	MP Biomedicals	4110-012	For preparation: follow instructions as given on the box. Filter sterilize the media using a 0.22 µm filter instead of autoclaving. This gives transparency to the media and reduces the autofluorescence.
Supplements (for EMM)	MP Biomedicals	4104-012	http://www.mpbio.com/search.php?q=4104-012&s=Search
(Add 225 mg/L into the EMM media before autoclaving or filtering)			
Stericup and Steritop Vaccum driven sterile filters	Millipore	-	http://www.millipore.com/cellbiology/fix4/cellculture_prepare&tab1=2&tab2=1#tab2=1:ta