

Materials List for:

A Microfluidic Chip for the Versatile Chemical Analysis of Single Cells

Klaus Eyer¹, Phillip Kuhn¹, Simone Stratz¹, Petra S Dittrich¹

¹Department of Chemistry and Applied Biosciences, ETH Zurich, Switzerland

Correspondence to: Petra S Dittrich at dittrich@org.chem.ethz.ch

URL: <https://www.jove.com/video/50618>

DOI: [doi:10.3791/50618](https://doi.org/10.3791/50618)

Materials

Name	Company	Catalog Number	Comments
REAGENTS:			
Name of the Reagent	Company	Catalogue Number	Comments (optional)
SU-8 2015	MicroChem Corp. (Netwon, MA)	n.a.	
1H,1H,2H,2H-Perfluorodecyl-dimethylchloro-silane	ABCR (Karlsruhe, Germany)	AB103608	
4-Methylumbelliferyl β-D-N,N'-diacetylchitobioside hydrate	Sigma Aldrich	M9763	
Acetone	Merck VWR (Darmstadt, Germany)	100014	
Avidin	AppliChem (Axon Lab AG)	A-2568	
AZ 1518	AZ Electronic Materials (Wiesbaden, Germany)	n.a.	
AZ 726 developer	AZ Electronic Materials (Wiesbaden, Germany)	n.a.	
Bovine serum albumin	Sigma Aldrich	A-4503	
Bovine serum albumin, biotin	Sigma Aldrich	A-8549	
Cell dissociation buffer	Invitrogen	13151-014	
Hexamethyldisilazane (HDMS)	Sigma Aldrich	40215	
Hydrochloric acid	Fluka	84422	
Isopropanol	Merck VWR (Darmstadt, Germany)	109634	
Magnesium chloride hexahydrate	Fluka	63068	
MR developer 600	Microresist technology GmbH (Berlin, Germany)	n.a.	
PBS	Invitrogen	10010-031	
PLL-g-PEG grafted	SuSoS, (Dübendorf, Switzerland)	n.a.	
PLL-g-PEG grafted biotin	SuSoS, (Dübendorf, Switzerland)	n.a.	
Potassium chloride	Fluka	60132	
Protein G, biotin	Sigma Fine Chemicals	41624	
Silicon wafer	Si-Mat (Kaufering, Germany)	n.a.	
Sylgard 184 Silicone Elastomer Kit (PDMS)	Dow Corning	39100000	
Tris(hydroxymethyl)-aminomethan	Biorad	1610716	
Tween 20	Biorad	1706531	
EQUIPMENT:			
Material Name	Company	Catalogue Number	Comments (optional)
0.22 µm PES syringe filter	TRP	99722	
1/1.5 mm biopsy puncher	Miltex, York PA	33-31AA/33-31A	
Cell Trics filter 20 µm	Partec	04-004-2325	

Centrifuge Sigma 3-18K	Kuehner	n.a.	
Hotplate HP 160 III BM	Sawatec, Sax, Switzerland	n.a.	
MA-6 mask aligner	Karl Suess	n.a.	
Multizoom AZ100M microscope	Nikon Corporation	n.a.	
Photomask	Microlitho, Essex, U.K.	n.a.	
Plasma Cleaner PDC-32G	Harrick	n.a.	
Spin coater Modell WS-400 BZ-6NPP/LITE	Laurell	n.a.	
Spin Modules SM 180 BM	Sawatec, Sax, Switzerland	n.a.	
Step profiler Dektak XT Advanced	Bruker	n.a.	
Syringe pump neMESYS	Cetoni	n.a.	