

Materials List for:

Membrane Transport Processes Analyzed by a Highly Parallel Nanopore Chip System at Single Protein Resolution

Michael Urban¹, Marc Vor der Brüggen², Robert Tampé¹

¹Institute of Biochemistry, Biocenter, Goethe University Frankfurt

²Nanospot GmbH

Correspondence to: Robert Tampé at tampe@em.uni-frankfurt.de

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Materials

Name	Company	Catalog Number	Comments
Reagent			
[2-(Trimethylammonium)ethyl] methanethiosulfonate	Toronto Research Chemicals Inc.	T792900	MTSET; hydrolized by water. Keep as dry powder aliquot at -80 °C. Use immediately (30 minutes) after solubilization in buffer.
1 ml gas-tight syringe	Hamilton	#1001	
10 ml round flask	Schott Duran		
2.7 mm glas beads	Roth	N032.1	
2-Propanole	Roth	9866.5	
30 cm Luer-Lock Extension Tube	Sarstedt	744304	
Acetone	Roth	5025.5	
Bio-Beads SM-2 Adsorbent	Bio-Rad	152-3920	need to be activated before first use
CaCl ₂ Dihydrat	Roth	HN04.3	
Calcein	Sigma	C0875	store dark at -20 °C
Chloroform reagent grade	VWR Chemicals	22711324	
DOPE ^{ATTO390}	ATTO-TEC	AD 390-165	store dark at -20 °C
Ethanol absolute	Sigma-Aldrich	32205	
Injekt Single-use syringe	Braun	460 60 51V	
Injekt-F single-use syringe	Braun	91 66 017V	
Keck clips	Schott	KC29	
L-α-Phosphatidylcholine, 20% (Soy)	Avanti Polar Lipids	5416016	store under inert gas at -20 °C
NaCl 99.5% p.a.	Roth	3957.2	
Nanopore E100 wafer/chips	Micromotive (Mainz/Germany)		available on request
Nucleopore Track-Etch Membrane 0.4 µm	Whatman	800282	
Oregon Green Dextran 488 (70 kDa)	life Technologies	D-7173	store dark at -20 °C
Oy647	Luminartis (Münster/Germany)	OY-647-T-1mg	store dark at -20 °C
Rotilabo-syringe filtration, unsterile, pore-size 0.22 µm	Roth	P 818.1	
Sephadex G-50	Sigma-Aldrich	G5080	column material for size exclusion chromatography
Silastic MDX4-4210	Dow Corning		curing agent for chip fixation onto cover glass support

sticky-Slide 8-well	ibidi	80828	multi-well chamber for the mounting onto glass slides (chip holder)
Three-way stopcock blue	Sarstedt	744410001	
Tris Pufferan 99.9% Ultra Quality	Roth	5429.2	
Triton-X 100	Roth	6683.1	
Whatman 0.2 µm cellulose nitrate membrane filter	Roth	NH69.1	
Name	Company	Catalog Number	Comments
Equipment			
Büchi 461 water bath	Büchi		
Büchi Rotavapor RE 111	Büchi		
Cary Eclipse Fluorescence Spectrophotometer	Varian		
LiposoFast Mini Extruder	Avestin		
Membrane pump	Vaccubrand	15430	
Nanosight Nanoparticle Tracking Microscope	Malvern / Nanosight	LM 14C	
NyONE microscope	Synentec		available on request
Pump control	Vaccubrand	CVC 2II	
Sonicator bath Sonorex RK100H	Brandelin electronic	31200001107477	
Vaccum pump RC5	Vaccubrand	1805400204	
Water bath W13	Haake	002-9910	
Plasma Cleaner PDC-37G	Harrick Plasma	PDC-37G	
Name	Company	Catalog Number	Comments
Software			
ImageJ	Open Source	http://imagej.nih.gov/ij/	scientific image processing software
NanoCalcFX	Freeware	http://sourceforge.net/projects/nanocalc/	data analysis/evaluation software for massive transport kinetic datasets
NTA 2.3 Analytical Software	Nanosight		data acquisition and analysis software for nanoparticle tracking microscope
NTA 2.3 Temperature Comms	Nanosight		temperature controle software for nanoparticle tracking microscope