

Materials List for:

SNARE-mediated Fusion of Single Proteoliposomes with Tethered Supported Bilayers in a Microfluidic Flow Cell Monitored by Polarized TIRF Microscopy

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Materials

Name	Company	Catalog Number	Comments
Reagents			
Milli-Q (MQ) water	Millipore		
KOH	J.T. Baker	3040-05	
Ethanol 190 Proof	Decon		
Isopropanol	Fisher Chemical	A416P4	
HEPES	AmericanBio	AB00892	
Sodium Chloride (KCl)	AmericanBio	AB01915	
Dithiothreitol	AmericanBio	AB00490	
<i>N</i> -[2-hydroxyethyl] piperazine- <i>N'</i> -[2-ethanesulfonic acid] (HEPES)	AmericanBio	AB00892	
EGTA	Acros Organics	409911000	
Buffers			
HEPES-KOH buffer (pH 7.4)			25 mM HEPES-KOH, 140 mM KCl, 100 μM EGTA, 1 mM DTT
Solvents			
Chloroform	J.T. Baker	9180-01	in glass bottle, CAUTION, wear PPE
Methanol	J.T. Baker	9070-03	in glass bottle, CAUTION, wear PPE
Liposome preparation			
Gastight Hamilton syringe	Hamilton	var. sizes	only use glass syringe with solvents (Chloroform/ Methanol, 2:1, v/v)
Glass tubes Pyrex Vista 11 ml, 16x100 mm screw cap culture tube	Pyrex	70825-16	clean thoroughly, rinse with chloroform
1-palmitoyl-2-oleoyl- <i>sn</i> -glycero-3-phosphocholine, 16:0-18:1 PC (POPC)	Avanti Polar Lipids	850457	Lipids come dissolved in CHCl ₃ or as lyophilized powder in sealed vials. Aliquot upon opening. Store extra as dried lipid films under inert atmosphere at -20 °C. Keep stocks in CHCl ₃ /MeOH (2:1, v/v) at -20 °C. let come to RT before opening
1,2-dioleoyl- <i>sn</i> -glycero-3-phospho-L-serine (sodium salt), 18:1 PS (DOPS)	Avanti Polar Lipids	840035	Same as above.

1-stearoyl-2-arachidonoyl- <i>sn</i> -glycero-3-phosphoethanolamine, 18:0-20:4 PE (SAPE)	Avanti Polar Lipids	850804	Same as above.
L- α -phosphatidylinositol-4,5-bisphosphate (Brain, Porcine) (ammonium salt), Brain PI(4,5)P ₂	Avanti Polar Lipids	840046	Same as above.
1,2-dioleoyl- <i>sn</i> -glycero-3-phosphoethanolamine- <i>N</i> -(7-nitro-2-1,3-benzoxadiazol-4-yl) (ammonium salt), 18:1 NBD PE	Avanti Polar Lipids	810145	Same as above.
1,2-dioleoyl- <i>sn</i> -glycero-3-phosphoethanolamine- <i>N</i> -[methoxy(polyethylene glycol)-2000] (ammonium salt), 18:1 PEG2000 PE	Avanti Polar Lipids	880130	Same as above.
cholesterol (ovine wool,>98%)	Avanti Polar Lipids	700000	Same as above.
DiD ⁺ oil; DiIC18(5) oil (1,1'-Dioctadecyl-3,3',3'-Tetramethylindodicarbocyanine Perchlorate)	Molecular Probes	D-307	
Rotavapor R-210	Buchi	R-210	heat bath above T _m of lipids used
OG n-Octyl- β -D-Glucopyranoside	Affymetrix	0311	store at -20 °C, let come to RT before opening
Shaker - Eppendorf Thermomixer R	Eppendorf		
Slide-A-Lyze Dialysis Cassettes, 20k MWCO, 3 ml	life technologies	66003	
Bio-Beads SM-2 Adsorbents	Bio-Rad	1523920	
OptiPrep Density Gradient Medium	Sigma-Aldrich	D1556	
Ultracentrifugation tube, Thinwall, Ultra-Clear, 13.2 ml, 14 x 89 mm	Beckman Coulter	41121703	
Beckman SW41 Ti rotor			
SulforhodamineB	Molecular Probes	S-1307	
Econo-Column Chromatography Columns, 2.5 x 10 cm	Bio-Rad	7372512	
Sepharose CL-4B	GE Healthcare	17-0150-01	
SYPRO Orange Protein Gel Stain	Molecular Probes	S-6650	5,000x Concentrate in DMSO
PDMS block			
Sylgard 184 Silicone elastomer kit, PDMS	Dow Corning	3097358-1004	
Pyrex glass petri dish, 150 x 20 mm, complete with cover	Corning	3160-152	
Hole puncher - Reusable Biopsy Punch, 0.75 mm	World Precision Instruments	504529	
Manual Hole Punching Machine	SYNEO	MHPM-UNV	
Drill .035 x .026 x 1.5 304 SS TiN coated round punch	SYNEO	CR0350265N20R4	drill diameter: 0.9 mm, punch bore size: 0.74 mm
Tygon Microbore tubing, 0.25 mm ID, 0.76 mm OD	Cole-Parmer	06419-00	0.010" ID, 0.030" OD
Silicone Tubing (0.51 mm ID, 2.1 mm OD)	Cole-Parmer	95802-00	0.020" ID, 0.083" OD
Cover glass - cleanroom cleaned			
Schott Nexterion cover slip glass D	Schott	1472305	
plasma cleaner	Harrick	PDC-32G	

pTIRF setup and accessories			
IX81 microscope body	Olympus	IX81	
EM CCD camera	Andor	ixon-ultra-897	
Thermo Plate, heated microscope stage	Tokai Hit	MATS-U52RA26	
1 ml hamilton glass syringes (4x)	Hamilton	81365	
syringe pump	kd Scientific	KDS-230	