

Materials List for

Rapid Encapsulation of Reconstituted Cytoskeleton Inside Giant Unilamellar Vesicles

Yashar Bashirzadeh^{*1}, Nadab Wubshet^{*1}, Thomas Litschel², Petra Schwille³, Allen P. Liu^{1,4,5,6}

¹Department of Mechanical Engineering, University of Michigan, Ann Arbor ²John A. Paulson School of Engineering and Applied Sciences, Harvard University ³Department of Cellular and Molecular Biophysics, Max Planck Institute of Biochemistry ⁴Department of Biomedical Engineering, University of Michigan, Ann Arbor ⁵Department of Biophysics, University of Michigan, Ann Arbor ⁶Cellular and Molecular Biology Program, University of Michigan, Ann Arbor

* These authors contributed equally

Corresponding Author

Allen P. Liu
allenliu@umich.edu

Citation

Bashirzadeh, Y., Wubshet, N., Litschel, T., Schwille, P., Liu, A.P. Rapid Encapsulation of Reconstituted Cytoskeleton Inside Giant Unilamellar Vesicles. *J. Vis. Exp.* (177), e63332, doi:10.3791/63332 (2021).

Date Published

November 10, 2021

DOI

10.3791/63332

URL

jove.com/video/63332

Materials

Name	Company	Catalog Number	Comments
18:1 Liss Rhod PE lipid in chloroform	Avanti Polar Lipids	810150C	
96 Well Optical Btm Pit PolymerBase	ThermoFisher Scientific	165305	
Actin from rabbit skeletal muscle	Cytoskeleton	AKL99-A	
ATTO 488-actin from rabbit skeletal muscle	Hypermol	8153-01	
Axygen microtubes (200 µL)	Fisher Scientific	14-222-262	for handling ABPs
Black resin	Formlabs	RS-F2-GPBK-04	
Cholesterol (powder)	Avanti Polar Lipids	700100P	
Choloroform	Sigma Aldrich	67-66-3	
Clear resin	Formlabs	RS-F2-GPCL-04	
CSU-X1 Confocal Scanner Unit	YOKOGAWA	CSU-X1	
Density gradient medium (Optiprep)	Sigma-Aldrich	D1556	
DOPC lipid in chloroform	Avanti Polar Lipids	850375C	
Fascin	homemade	N/A	
F-buffer	homemade	N/A	
Fisherbrand microtubes (1.5 mL)	Fisher Scientific	05-408-129	
FS02 Sonicator	Fischer Scientific	FS20	
G-buffer	homemade	N/A	
Glucose	Sigma-Aldrich	158968	
iXon X3 camera	Andor	DU-897E-CS0	
Mineral oil	Acros Organics	8042-47-5	
Olympus IX81 Inverted Microscope	Olympus	IX21	
Olympus PlanApo N 60x Oil Microscope Objective	Olumpus	1-U2B933	

Silicone oil	Sigma-Aldrich	317667	
--------------	---------------	--------	--