

Materials List for:

A Novel Method for Localizing Reporter Fluorescent Beads Near the Cell Culture Surface for Traction Force Microscopy

Samantha G. Knoll¹, M. Yakut Ali¹, M. Taher A. Saif¹

¹Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign

Correspondence to: M. Taher A. Saif at saif@illinois.edu

URL: <https://www.jove.com/video/51873>

DOI: [doi:10.3791/51873](https://doi.org/10.3791/51873)

Materials

Name	Company	Catalog Number	Comments
Reagents			
97% 3-Aminopropyl-trimethoxysilane (APTES)	Sigma-Aldrich	281778	
70% Glutaraldehyde	Polysciences, Inc.	111-30-8	
1 M HEPES buffer solution	Sigma-Aldrich	83264	
40% Acrylamide	Sigma-Aldrich	A4058	
2% Bisacrylamide	Sigma-Aldrich	M1533	
0.1 µm Fluorescent microspheres (mCherry)	Invitrogen	F8801	
Fibronectin, Human, 1 mg	BD Biosciences	354008	
Ammonium persulfate	Bio-RAD	161-0700	
Tetramethylethylenediamine (TEMED)	Bio-RAD	161-0801	
Poly-D-lysine	Millipore	A-003-E	
1-Ethyl-3-[3-dimethylaminopropyl]carbodiimide hydrochloride (EDC)	Thermo Scientific	22980	
N-hydroxysulfosuccinimide (NHS)	Thermo Scientific	24500	
0.05% Trypsin-EDTA (1X)	Life Technologies	25300-054	
NaCl	Sigma-Aldrich	S9888	
Acrylic acid	Sigma-Aldrich	147230	
Glycerol	Sigma-Aldrich	G7757	
2-(N-morpholino)ethanesulfonic acid (MES)	Sigma-Aldrich	M3671	
Materials			
35 mm Glass bottom dish with 14 mm micro-well #1 cover glass	In Vitro Scientific	D35-14-1-N	
Glass cover slips, 12 mm diam.	Ted Pella, Inc.	26023	