

Materials List for

Near Simultaneous Laser Scanning Confocal and Atomic Force Microscopy (Conpokal) on Live Cells

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Materials

Name	Company	Catalog Number	Comments
Acoustic Enclosure	JPK-Bruker	Acoustic Enclosure	Chamber used to mitigate noise
BioTracker 488 Green Microtubule Cytoskeleton Dye	Millipore Sigma	SCT142	Used to label microtubules in mammalian cells
CP-qp-CONT-BSG AFM tips	NanoAndMore	CP-qp-CONT-BSG-B	Colloidal AFM tips good for modulus measurements on biological samples
Dil Stain (1,1'-Dioctadecyl-3,3',3'-Tetramethylindocarbocyanine Perchlorate ('Dil'; DiIC18(3)))	ThermoFischer Scientific	D282	Used to label plasma membrane of mammalian cells
Dulbecco's Modified Eagle Medium	VWR	VWRL0100-0500	Component of cell culture media
Dulbecco's Phosphate-Buffered Saline	ThermoFisher Scientific	A1285601	Used to simulate biological environment
Fetal Bovine Serum	Fischer Scientific	45000-736	Component of cell culture media
Fisher BioReagents Microbiology Media Additives: Yeast Extract	Fischer Scientific	BP1422-500	Component of bacterial culture medium
FluoroDish Cell Culture Dish	World Precision Instruments (WPI)	FD35-100	Glass-bottomed dishes whose side walls are less than 10 mm, necessary for full function of Nanowizard 4a AFM
Hoechst 33342 nucleic acid stain	ThermoFischer Scientific	62249	Used to label nucleus of mammalian cells, a good nuclear marker for live cells
Human embryonic kidney 293 cells	ATCC Global Bioresource Center	CRL-1573	Mammalian cells used in protocol
Matrigel	VWR	47743-716	Coating in cell culture dish
Model: PFQNM-LC-A-CAL AFM tips	Bruker	PFQNM-LC-A-CAL	AFM tips that work well for samples that have large heights (such as eukaryotic cells)
NanoWizard 4a	JPK-Bruker	NanoWizard 4a	AFM
Nikon A1 Laser Scanning Confocal Microscope	Nikon	A1 HD25	Microscope used for brightfield, epifluorescence, and confocal imaging
PENICILLIN/STREPTOMYCIN	VWR	16777-164	Component of cell culture media
PetriDishHeater	JPK-Bruker	PetriDishHeater	Maintains desired Petri dish sample temperature

qp-BioAC-CI AFM tips	Nanosensors	qp-BioAC-CI-10	Three different AFM cantilevers of varying stiffness
Replaceable Carbon Fiber Tip Tweezers	Ted Pella Inc.	5051	Used to carefully place and remove delicate AFM tips into the glass mounting block
Todd Hewitt Broth Bacto	BD DIFCO Bacterius Ltd	Bacto-249240	Component of bacterial culture medium
Vancomycin, BODIPY FL Conjugate	Thermo Fisher Scientific	V34850	Used to fluorescently label bacterial cell wall