

Combining 3D Magnetic Force Actuator and Multi-Functional Fluorescence Imaging to Study Nucleus Mechanobiology

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Materials

Name	Company	Catalog Number	Comments
0.05 % Trypsin	Corning	25-051-CI	
25 cm ² flask	Corning	156340	
7- μ m mean diameter carbonyl iron microbeads	N/A	N/A	
A1R confocal system	Nikon		
Carbonyl Iron Powder CM	BASF	30042253	Magnetic microbead
Culture medium (RPMI-1640)	Gibco	11875093	
Desktop Computer	Dell		with Windows 10 operating system
Environmental chamber TIZB	Tokai Hit	TIZB	
Fetal bovine serum (FBS)	Gibco	26140	
Fiji ImageJ	National Institutes of Health and the Laboratory for Optical and Computational Instrumentation		
Glass-bottom petri dish	MatTek	P35G-1.5-14-C	
Magnet	K&J Magnetics, Inc.	D99-N52	
Monochrome Camera	FLIR	BFS-U3-70S7M-C	
NIS-Elements software platform	Nikon		software platform
Nucleus mask ImageJ macro			https://github.com/KOLIUG/Nuclear mask
NucSpot Live 650	Biotium	#40082	Nuclear stain
Penicillin-streptomycin	Gibco	15140122	
Phosphate buffered saline (PBS)	Gibco	10010023	

Ti2-E inverted microscope	Nikon		
XYZ mover (CAD files)			https://github.com/KOLIUG/XYZ-mover