

Materials List for:

Time-lapse Imaging of Mouse Macrophage Chemotaxis

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Materials

Name	Company	Catalog Number	Comments
μ-Slide (anodized aluminium) rack	Ibidi, Martinsried, Germany	80003	Autoclavable stackable rack for channel slides
μ-Slide Chemotaxis 2D (chemotaxis slide)	Ibidi, Martinsried, Germany	80306	Slide containing chemotaxis chambers (tissue culture treated)
100x penicillin/streptomycin	Thermo Fisher Scientific	15140122	Used as supplement for RPMI 1640 media
10-100 μL pipette with volume control ring	Eppendorf	3123000047	Eppendorf Research plus pipette
10-200 μL pipette tips	Greiner Bio-One International	739261	Pipette tips with beveled tips (96 pieces per rack: sterile)
14 mL polypropylene round bottom tubes	BD Falcon	352059	Used to collect peritoneal cells
14-bit Hamamatsu C9100-50 Electron Multiplying-Charged Couple Device (EM-CCD) peltier-cooled camera	Hamamatsu Photonics Inc., Japan		EM-CCD camera of the spinning disk confocal microscope system
2-20 μL pipette with volume control ring	Eppendorf	3123000039	Eppendorf Research plus pipette
24 G plastic catheter	B Braun Mesungen AG, Germany	4254503-01	Used for peritoneal lavage
405 nm solid state laser, 50 mW	Perkin Elmer, Rodgau, Germany		Laser (405 nm) source of spinning disk confocal microscope system
488 nm solid state laser, 50 mW	Perkin Elmer, Rodgau, Germany		Laser (488 nm) source of spinning disk confocal microscope system
561 nm solid state laser, 50 mW	Perkin Elmer, Rodgau, Germany		Laser (561 nm) source of spinning disk confocal microscope system
Alexa Fluor 488-conjugated rat (IgG2a) monoclonal (clone BM8) anti-mouse F4/80 antibody	Thermo Fisher Scientific	MF48020	Mouse macrophage marker and plasma membrane label
Alexa Fluor 594-conjugated rat (IgG2a) monoclonal (clone 6D5) anti-mouse CD19 antibody	BioLegend	115552	Mouse B cell marker
C-Chip disposable (improved Neubauer) hemocytometer	NanoEnTek (distributed by VWR International)	631-1098	Used to count cells
CSU-X1 spinning disk scanner	Yokogawa Electric Corporation, Japan		Nipkow spinning disk unit
Hank's buffered salt solution without Ca ²⁺ and Mg ²⁺	Thermo Fisher Scientific	14170120	Used for peritoneal lavage
Heat-inactivated fetal bovine serum	Thermo Fisher Scientific	10082139	Used as supplement for RPMI 1640 media
Hoechst 34580	Thermo Fisher Scientific	H21486	Cell permeable, blue fluorescent nucleic acid stain
ImageJ (image processing and analysis in Java)	National Institutes of Health (NIH)		Image analysis software

Lipopolysaccharides from <i>Escherichia coli</i> O111:B4	Sigma-Aldrich	L4391-1MG	Toll-like receptor 4 ligand
Nikon Eclipse Ti inverse microscope	Nikon, Japan		Inverted microscope
Patent Blue V, sodium salt	Sigma-Aldrich	21605-10G	Blue-colored dye used as visual indicator of gradient formation
Recombinant mouse complement C5a protein	R&D Systems	2150-C5-025	Chemoattractant for mouse macrophages
RPMI 1640 medium containing 20 mM Hepes	Sigma-Aldrich	R7388	Basis medium for assays
UltraVIEW Vox 3D live cell imaging system + Volocity software	Perkin Elmer, Rodgau, Germany		Spinning disk confocal microscope system
Zeiss LSM 510 + Axiovision software	Carl Zeiss Microscopy, Oberkochen, Germany		Confocal laser scanning microscope (LSM) adapted for phase-contrast microscopy