

Materials List for:

Fabrication of Anisotropic Polymeric Artificial Antigen Presenting Cells for CD8+ T Cell Activation

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Materials

Name	Company	Catalog Number	Comments
Poly(vinyl alcohol), MW 25000, 88% hydrolyzed	Polysciences, Inc.	02975-500	
Glycerol	Sigma-Aldrich	G9012	
Digital Thermometer	Fluke	N/A	Model name: Fluke 52 II
Immersion Temperature Probe	Fluke	N/A	Model name: Fluke 80PK 22
Digital Hotplate & Stirrer	Benchmark Scientific	H3760-HS	
Multipoint stirrer	Thermo Fisher Scientific	50093538	
Resomer RG 504 H, Poly(D,L-lactide-co-glycolide)	Sigma-Aldrich	719900	
Dichloromethane	Sigma-Aldrich	D65100	
Homogenizer	IKA	0003725001	
Sonicator	Sonics & Materials, Inc.	N/A	Model number: VC 505
Sonicator sound abating enclosure	Sonics & Materials, Inc.	N/A	Part number: 630-0427
Sonicator probe	Sonics & Materials, Inc.	N/A	Part number: 630-0220
Sonicator microtip	Sonics & Materials, Inc.	N/A	Part number: 630-0423
High speed centrifuge	Beckman Coulter	N/A	Model number: J-20XP (discontinued), alternative model: J-26XP
High speed centrifuge rotor	Beckman Coulter	369691	Model number: JA-17
High speed polycarbonate centrifuge tubes	Thermo Fisher Scientific	3118-0050	50 mL, screw cap
Rectangular disposable petri dish	VWR International	25384-322	75 x 50 x 10 mm
Square disposable petri dish	VWR International	10799-140	100 mm x 100 mm
LEAF Purified anti-mouse CD3ε Antibody	Biolegend	100314	
InVivoMab anti-mouse CD28, clone 37.51	Bio X Cell	BE0015-1	
N-(3-Dimethylaminopropyl)-N'-ethylcarbodiimide hydrochloride	Sigma-Aldrich	E6383	
N-Hydroxysulfosuccinimide sodium salt	Sigma-Aldrich	56485	
MES	Sigma-Aldrich	M3671	
Alexa Fluor 488 anti-mouse CD3 Antibody	Biolegend	100212	
APC anti-mouse CD28 Antibody	Biolegend	102109	

Corning 96 Well Solid Polystyrene Microplate	Sigma-Aldrich	CLS3915	flat bottom, black polystyrene
Protein LoBind Tubes, 1.5 mL	Eppendorf	22431081	
RPML 1640 Medium (+ L- Glutamine)	ThermoFisher Scientific	11875093	
Fetal Bovine Serum	Sigma-Aldrich	F4135	Heat Inactivated, sterile-filtered
Ciprofloxacin	Sigma-Aldrich	17850	
2-Mercaptoethanol	Sigma-Aldrich	M6250	
Recombinant Human IL-2 (carrier-free)	Biolegend	589102	
Sodium Pyruvate (100 mM)	ThermoFisher Scientific	11360070	
MEM Non-Essential Amino Acids Solution (100X)	ThermoFisher Scientific	11140050	
MEM Vitamin Solution (100X)	ThermoFisher Scientific	11120052	
CD8a+ T Cell Isolation Kit, mouse	Miltenyi Biotech	130-104-075	
CellTrace CFSE Cell Proliferation Kit	ThermoFisher Scientific	C34554	
LS Columns	Miltenyi Biotech	130-042-401	
MidiMACS Separator	Miltenyi Biotech	130-042-302	
MACS Multistand	Miltenyi Biotech	130-042-303	
Flow Cytometer	Accuri C6		
Synergy 2 Multi-Detection Microplate Reader	BioTek		
autoMACS Running Buffer	Miltenyi Blotech	130-091-221	
Cell Strainer	ThermoFisher Scientific	22363548	Sterile, 70 µm nylon mesh
ACK Lysing Buffer	ThermoFisher Scientific	A1049201	
C57BL/6J (Black 6) Mouse	The Jackson Laboratory	000664	Male, at least 7 weeks old
U-Bottom Tissue Culture Plates	VWR	353227	Sterile, 96-well tissue culture treated polystyrene plates
40 V DC Power Supply	Probotix	LPSK-4010	
PTFE Coated Wire	Mouser	602-5858-100-01	This is for a 100 ft. spool but an equivalent wire will work
Stepper Motor Driver	Probotix	MondoStep5.6	
IDC Connector Kit	Probotix	IDCM-10-12	
Microcontroller	Probotix	PBX-RF	
4A Fuses	Radio Shack	2701026	Equivalent fuses will work as well
DB25 Male to Male Cable	Probotix	DB25-6	
USB-A to USB-B Cable	Staples	2094915	Equivalent cable will work as well
8-Pin Amphenol Connectors Male and Female	Mouser	654-97-3100A-20-7P and 654-97-3106A20-7S	
Stepper Motor	Probotix	HT23-420-8	
Right Hand Lead Screw	Roton	60722	
Left Hand Lead Screw	Roton	60723	
Screws	McMaster Carr	92196A151	
Neoprene Rubber	McMaster Carr	8698K51	
Right Handed Flanged Lead Nut	Roton	91962	
Left Handed Flanged Lead Nut	Roton	91963	

Linux Control Computer	Probotix	LCNC-PC	Any computer with matching specification and Linux operating system will work
Corning bottle-top vacuum filter system	Sigma-Aldrich	CLS431097	
Trypan Blue Solution, 0.4 %	ThermoFisher Scientific	15250061	