Materials List for

In Vitro Model Integrating Substrate Stiffness and Flow to Study Endothelial Cell Responses

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Materials

Name	Company	Catalog Number	Comments
(trimethoxysilyl)propyl methacrylate, tetramethylethylenediamine (TEMED)	Invitrogen	15524-010	Hydrogel Fabrication
3-(Trimethoxysilyl)Propyl Methacrylate	Sigma-Aldrich	440159	Glass Salinization
4',6-diamidino-2-phenylindole (DAPI)-containing mounting media	Vector Laboratories	H-1200	Immunostaining
Acetone	Thermo Fisher Scientifics	A18-4	GelMA Synthesis
Alexa Fluor 555 Phalloidin	Cell Signaling Technology	8953S	Immunostaining
Ammonium Persulfate (APS)	Bio-Rad	1610700	Hydrogel Fabrication
Clear Scratch- and UV-Resistant Cast Acrylic Sheet (45/64")	McMaster-CARR	8560K165	Flow Chamber Fabrication
Confocal Microscope	Carl Zeiss Meditex AG	Zeiss LSM 800	Immunostaining
Covidien Monoject Rigid Pack 60 mL Syringes without Needles	Fisher	22-031-375	Flow Experiment
EC growth kit	American Type Culture Collection (ATCC)	PCS-100-041	Cell Culture
Ethanol 200 Proof	Decon Labs	2701	Glass Salinization
Gelatin Type A (300 bloom) from porcine skin	Sigma-Aldrich	G1890	GelMA Synthesis
Glacial Acetic Acid	Thermo Fisher Scientifics	9526-33	Glass Salinization
High-Purity High-Temperature Silicone Rubber Sheet	McMaster-Carr	87315K74	Flow Chamber Fabrication
Human Umbilical Vein Endothelial Cells (HUVEC)	American Type Culture Collection (ATCC)	PSC-100-010	Cell Culture
M3x30mm Machine Screws Hex Socket Round Head Screw 304 Stainless Steel Fasteners Bolts 20pcs	Uxcell	B07Q5RM2TP	Flow Chamber Fabrication

Masterflex L/S Digital Drive with Easy-Load® 3 Pump Head for Precision Tubing; 115/230 VAC	VWR	#MFLX77921-65	Flow Experiment
Masterflex L/S Precision Pump Tubing, Puri-Flex, L/S 25; 25 ft	VWR	#MFLX96419-25	Flow Experiment
Methacrylic Anhydride (MAH)	Sigma-Aldrich	276685	GelMA Synthesis
Paraformaldehyde	Thermo Fisher Scientifics	043368.9M	Cell Culture
Phosphate-Buffered Saline (PBS)	Gibco	14080-055	General
Sodium Bicarbonate	Fisher Chemical	S233-3	GelMA Synthesis
Sodium Carbonate	Fisher Chemical	S263-500	GelMA Synthesis
SOLIDWORKS educational version			
SOLIDWORKS Student Edition Desktop, 2023	SolidWorks	N/A	Flow Chamber Design
Vascular Basal Medium	American Type Culture Collection (ATCC)	PCS-100-030	Cell Culture