

Materials List for:

An *In Vitro* Organ Culture Model of the Murine Intervertebral Disc

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URL: <https://www.jove.com/video/55437>

DOI: [doi:10.3791/55437](https://doi.org/10.3791/55437)

Materials

Name	Company	Catalog Number	Comments
96 well plate	Midwest Scientific	TP92096	Used for biochemical assays
24 well plate	Midwest Scientific	TP92024	Used for organ culture
25 mL pipettes	Midwest Scientific	TP94024	Used for organ culture
10 mL pipettes	Midwest Scientific	TP94010	Used for organ culture
5 mL pipettes	Midwest Scientific	TP94005	Used for organ culture
500 mL bottle top filters, 22 µm	Midwest Scientific	TP99505	Used for filter media
10 µL pipette tips	Midwest Scientific	NP89140098	Used for biochemical assays
200 µL pipette tips	Midwest Scientific	NP89140900	Used for biochemical assays
1,000 µL pipette tips	Midwest Scientific	NP89140920	Used for biochemical assays
DMEM/F-12	Invitrogen	11330032	Used for culture media
Optiray 350	Guebert	19133341	Used for contrast enhanced microCT
Fetal Bovine Serum	Sigma	F2442	Used for culture media
Penicillin Streptomycin	Sigma	P4333	Used for culture media
Tetrazolium Blue Chloride	Sigma	T4375	Used for biochemical assays
D-Luciferin	Sigma	L6152	Used for bioluminescence imaging
Chondroitin Sulfate	Sigma	C9819	Used for biochemical assays
10% Phosphomolybdic Acid Solution	Sigma	HT152	Used for contrast enhanced microCT
Safranin O	Sigma	S8884	diluted to .1% concentration (in water)
Fast Green FCF	Sigma	F7258	.001% concentration
Papain from papaya latex	Sigma	P3125	Used for biochemical assays
DAPI	Sigma-Aldrich	D9542	Nucleic acid staining
Cyanoacrylate Glue	Loctite	234790	Adhesive
1.5 mL Microcentrifuge Tubes	Fischer Scientific	S348903	Used for biochemical assays
Big Equipment			
BioDent	ActiveLife		For mechanical testing
Cytation 5	Biotek		Spectrophotometer
AxioCam503	Carl Zeiss AG		Microscope
VivaCT40	Scanco		MicroCT
Analytical balance	Denver Instrument Company	A-200DS	Analytical balance
Incubator HERAcell 150i	Thermo Scientific		Organ Culture
Dissection Scope	VistaVision		Used during dissection

Laser Micrometer	Keyence	LK-081	Measuring disc height
Microcentrifuge 5810 R	Eppendorf		Used for biochemical assays
Microtome	Leica	RM2255	Used for histology
Software			
Prism 7	GraphPad		For statistics
MATLAB R2014a	Mathworks		For modeling
Osiri-LXIV	Pixmeo		Open Source
MeshLab v1.3.3	Visual Computing Lab - ISTI - CNR		Open Source
PreView/FEBio 2.3	Utah MRL & Columbia MBL		Open Source
ImageJ	NIH		
Microsoft Excel	Windows		
Dissection Tools			
Cohan-Vannas Spring Scissors	Fine Science Tools	15000-02	Or any nice pair of spring scissors
Fine Scissors - Sharp (small)	Fine Science Tools	14060-09	
Fine Scissors - Sharp (larger)	Fine Science Tools	14060-11	
Dumont #5 Forceps	Fine Science Tools	11252-40	At least 2; can also use #3
Extra Fine Graefe Forceps, serrated	Fine Science Tools	11150-10	At least 2
Micro-Adson Forceps, serrated	World Precision Instruments	503719-12	
Micro-Adson Forceps, teeth	World Precision Instruments	501244	
Scalpel Handle - #3	Fine Science Tools	10003-12	
Scalpel Handle - #4	Fine Science Tools	10004-13	
Scalpel Blades - #23	Fine Science Tools	10023-00	
Insect Pins, size 000	Fine Science Tools	26000-25	
27 G Needle	BD PrecisionGlide Needles	BD305109	