

Materials List for

Destabilization of the Medial Meniscus and Cartilage Scratch Murine Model of Accelerated Osteoarthritis

Lynette Dunning¹, Kendal McCulloch¹, John C. Lockhart¹, Carl S. Goodyear², Carmen Huesa²

¹Institute of Biomedical and Environmental Health Research, University of the West of Scotland ²Institute of Infection, Immunity and Inflammation, University of Glasgow

Corresponding Author	Citation		
Carmen Huesa carmen.huesa@glasgow.ac.uk	Medial Meniscus and Cartilage	Dunning, L., McCulloch, K., Lockhart, J.C., Goodyear, C.S., Huesa, C. Destabilization of the Medial Meniscus and Cartilage Scratch Murine Model of Accelerated Osteoarthritis. <i>J. Vis. Exp.</i> (185), e64159, doi:10.3791/64159 (2022).	
Date Published	DOI	URL	
July 6, 2022	10.3791/64159	jove.com/video/64159	

Materials

Name	Company	Catalog Number	Comments
#11 scalpel blade (and scalpel handle).	World precision instruments	500240	access the joint capsule
15° Cutting Angle microsurgical stab knife	MSP	REF7503	scratch the cartilage
6-0 vicryl rapide	Any medical supplies provider	-	alternative method to close wound
Anaesthetic rig	Generic (many different suppliers)	-	
Antibacterial skin clenser (Hibiscrub)	Amazon	-	To sterilise surgical skin area
Applicator for 7 mm clips	World precision instruments	500343	close the wound
Balance	Generic (many different suppliers)	-	To weigh mouse
Blunt curved forceps	Fine science tools	500232	move the patellar ligament to the side
Buprenorphine (Vetergesic)	Supplied by unit as it is a prescription drug	-	Analgesia
CT analyser	Bruker	3D.SUITE software	Software
Ctvol	Bruker	3D.SUITE software	Software
Data viewer	Bruker	3D.SUITE software	Software
Dynamic weight bearing equipment	Bioseb	BIO-DWB-DUAL	Measure limb loading and has cage, pressure matt and software for analysis
EDTA	Merck	E9884	10% solution in PBS (or water) to decalcify bone pH 7.4
Ethanol	Generic (many different suppliers)	-	for embedding decalcified bones
Fast Green FCF	Merck	F7252	For staining sections
Glacial acetic acid	Merck	1005706	For stianing sections
Haematoxylin solution	Merck	GHS132	Nuclear staining in paraffin sections.
Hoskins #21 micro-tweezers.	Cameron surgical limited	PHF1085	move the fat pad
Isofluorane	Supplied by unit as it is a prescription drug	-	
Mice	Charles river	-	C57Bl6/J male 8 weeks old (to allow acclimatisation in the unit)
Microcomputed tomography scanner	Bruker	SKYSCAN 1272 CMOS	μCT



Micropore surgical paper tape	FisherScientific	12787597	hold leg in position
Paraffin wax	Generic (many different suppliers)	-	for embedding decalcified bones
Reflex 7 mm stainless steel wound clips or	Fine science tools	12032-07	close the wound
Remover for 7 mm clips	World precision instruments	500347	remove wound clips
Rotary Microtome	Generic (many different suppliers)	-	To cut section of Paraffin embedded tissue.
Safranin-O	Merck	S2255	For staining sections
Serrated curved forceps	Fine science tools	15915	hold the skin
Sterile Drape	Generic (many different suppliers)	-	To ensure sterility of surgical area
Sterile Drape with key hole	Generic (many different suppliers)	-	To cover mouse and expose leg
Sterile saline	Generic (many different suppliers)		
Sterile surgical drape	Generic (many different suppliers)	-	maintain sterile environment for surgical tools
Sterile surgical drape with key hole	Generic (many different suppliers)	-	cover the mouse and keep leg through key hole
Straight Scissors	World precision instruments	14393	open the wound
Surgical microscope.	Generic (many different suppliers)	-	Adjustable focus.
Vannas spring scissors with 2 mm blades.	Fine science tools	15000-04	cut the MMTL
Xylene	Generic (many different suppliers)	-	for embedding decalcified bones