

Materials List for:

Quantification of Atherosclerosis in Mice

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Materials

Name	Company	Catalog Number	Comments
Acetone	VWR Chemicals	20066.296	For fixation of sections for immunohistochemistry.
Black electrical insulation tape (50 mm wide)	Any specialized retailer	-	To create pinning beds for aortic arches.
Centrifuge	Eppendorf	5417C	Benchtop microcentrifuge.
Cork board	Any specialized retailer	-	For cutting hearts in the preparation to cryomount aortic roots.
Cryostat	Thermo Scientific	Microm HM 560	For serial cryosectioning of aortic roots.
Deionized water	-	-	For rinsing and preparation of solutions.
Digital camera	Leica Microsystems	DC480	5.1 megapixel CCD for high-resolution images of aortic arches and aortic root sections.
Dissecting scissors (10 cm, straight)	World Precision Instruments	14393	For general dissection of organs.
Dumont forceps #5 (11 cm, straight)	World Precision Instruments	500341	For microdissection of aorta.
Ethanol 70% (v/v)	VWR Chemicals	83801.290	Highly flammable liquid and vapour, store in a well-ventilated place, and keep cool.
Ethanol absolute ≥99.8%	VWR Chemicals	20821.310	Highly flammable liquid and vapour, store in a well-ventilated place, and keep cool.
Formaldehyde 4% stabilised, buffered (pH 7.0)	VWR Chemicals	9713.1000	Harmful by inhalation, in contact with skin and if swallowed.
ImageJ	NIH	-	Image analysis software.
Iris forceps (10 cm, curved, serrated)	World Precision Instruments	15915-G	Used as anatomical forceps.
Isopropanol	Merck	1096341011	Flammable liquid, causes serious eye irritation, and may cause drowsiness or dizziness.
Kaiser's glycerol gelatine	Merck	1092420100	Aqueous mounting medium containing phenol. Suspected of causing genetic defects.
Light microscope	Leica Microsystems	DM LB2	For analysis during sectioning and documentation of Oil Red O stained micrographs.
Mayer's hematoxylin	Histolab	1820	Non-toxic staining solution without chloral hydrate, but causes serious eye irritation.

Mayo scissors (17 cm, straight)	World Precision Instruments	501751-G	For general dissection.
Micro Castroviejo needle holder (9 cm, straight)	World Precision Instruments	503376	For pinning of aortic arches.
Microcentrifuge tubes	Corning	MCT-175-C	Polypropylene microtubes with snaplock cap.
Microlance 3 needles, 23 gauge	BD	300800	For blood collection.
Microlance 3 needles, 27 gauge	BD	302200	For perfusion of mice.
Microvette 500 μ L, K3 EDTA	Sarstedt	20.1341.100	For blood collection.
Microvette 500 μ L, Lithium Heparin	Sarstedt	20.1345.100	For blood collection.
Minutien insect pins, 0.10 mm	Fine Science Tools	26002-10	For pinning of aortic arches.
Oil Red O	Sigma-Aldrich	O0625	Not classified as a hazardous substance or mixture.
Optimum cutting temperature (OCT) cryomount	Histolab	45830	For embedding tissue.
Parafilm M	Bemis	PM992	Paraffin wax film used to create pinning beds for aortic arches.
Petri dishes (100 mm x 20 mm)	Any cell culture supplier	-	Proposed as a storage container for pinned aortas.
Phosphate buffered saline (PBS)	-	-	Sterile and RNase-free solution is required for perfusion of mice.
Qualitative filter paper (grade 1001)	Munktell	120006	For filtering Oil Red O working solution (typical retention 2-3 μ m).
RNA ^{later} RNA stabilization reagent	Qiagen	76106	For stabilization of RNA in tissue samples
RNaseZap RNase Decontamination Solution	Invitrogen	AM9780	A surface decontamination solution that destroys RNases on contact.
Scalpel handle #3 (13 cm)	World Precision Instruments	500236	For cutting hearts in the preparation to cryomount aortic roots.
Standard scalpel blade #10	World Precision Instruments	500239	For cutting hearts in the preparation to cryomount aortic roots.
Stereomicroscope	Leica Microsystems	MZ6	For dissection and en face documentation
Sudan IV	Sigma-Aldrich	S4261	Not classified as a hazardous substance or mixture.
Superfrost Plus microscope slides	Thermo Scientific	J1800AMNZ	To collect aortic root sections.
Tissue forceps (15 cm)	World Precision Instruments	501741-G	For general dissection.
Tissue-Tek cryomolds (10 mm x 10 mm x 5 mm)	Sakura	4565	For embedding aortic roots in OCT.
Vannas scissors (8 cm, straight)	World Precision Instruments	503378	For microdissection of aorta.