

Monitoring Dynamic Growth of Retinal Vessels in Oxygen-Induced Retinopathy Mouse Model

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jove.com/video/62410

Materials

Name	Company	Catalog Number	Comments
1 mL sterile syringe	Solarbio	YA0550	For preparation of retinal flat mounts and intraperitoneal injection
1× Phosphate buffered saline (PBS)	Transgen Biotech	FG701-01	For preparation of retinal flat mounts
2 ml Microcentrifuge Tube	Corning	MCT-200-C	For preparation of retinal flat mounts
48 Well Clear TC-Treated Multiple Well Plates	Corning	3548	For preparation of retinal flat mounts
Adhesive microscope slides	Various		For preparation of retinal flat mounts
Adobe Photoshop CC 2019	Adobe Inc.		For image analysis
Carbon dioxide gas	Various		For sacrifice
Cover slide	Various		For preparation of retinal flat mounts
Curved forceps	World Precision Instruments	14127	For preparation of retinal flat mounts
DAPI staining solution	Abcam	ab228549	For labeling nucleus on retinal flat mounts
Dissecting microscope	Olympus	SZ61	For preparation of retinal flat mounts
Fluorescein sodium	Sigma-Aldrich	F6377	For <i>in vivo</i> imaging
Fluorescent Microscope	Zeiss	Axiolmager.Z2	For acquisition of fluorescence images of retinal flat mounts
Fluoromount-G Mounting media	SouthernBiotech	0100-01	For preparation of retinal flat mounts
Hydroxypropyl Methylcellulose	Maya	89161	For <i>in vivo</i> imaging
Isolectin B4 594 antibody	Invitrogen	I21413	For labeling retinal vasculature on retinal flat mounts
Mice C57/BL6J	GemPharmatech of Jiangsu Province		For OIR model induction
Micro dissecting scissors-straight blade	World Precision Instruments	503242	For preparation of retinal flat mounts
No.4 straight forceps	World Precision Instruments	501978-6	For preparation of retinal flat mounts
Normal donkey serum	Abcam	ab7475	For preparation of retinal flat mounts
O ₂ sensor	Various		For monitoring the level of O ₂
OxyCycler	Biospherix	A84XOV	For OIR model induction
Paraformaldehyde (PFA)	Sigma	P6148-1KG	For tissue fixation
Pentobarbital sodium	Various		For anesthesia

Soda lime	Various		For absorbing excess CO ₂ in the oxygen chamber
SPECTRALIS HRA+OCT	Heidelberg	HC00500002	For <i>in vivo</i> imaging
SPSS Statistics 22.0	IBM		For statistical analysis
Tansference decloring shaker	Kylin-Bell	ZD-2008	For preparation of retinal flat mounts
Tissue culture dish (Low attachment)	Corning	3261-20EA	For preparation of retinal flat mounts
Transfer pipettes	Various		For preparation of retinal flat mounts
Triton X-100	Sigma-Aldrich	SLBW6818	For preparation of retinal flat mounts
Tropicamide	Various		For <i>in vivo</i> imaging
ZEN Imaging Software	ZEISS		For image acquisition and export