

Materials List for

Transpupillary Two-photon In vivo Imaging of the Mouse Retina

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Materials

Name	Company	Catalog Number	Comments
#1.5 coverslip	ThermoFisher	152440	Richard-Allan #1.5 24 mm x 40 mm
50 mL glass syringe	Hamilton	80950	22G cemented needle
Adeno-associated virus (AAV2)	Hope Center Viral Core	NA	
Anesthesia Air Pump	RWD Life Science	R510-30	
Atropine	Sigma	A0132	For pupil dilator solution
Basic Small Animal Anesthesia Device	RWD Life Science	R500IE	
Borosilicate glass capillary	Sutter	B150-86-10	Outside diameter 1.50 mm, inside diameter 0.86 mm, length 10 cm
CFP/YFP filter cube	Chroma	custom	480/40, 505 long pass, 535/30
ChromoFlex - Two channel PMT detection unit	Scientifica	S-MPLG-1002	
Circulating heating pump	Braintree Scientific	tp-700	Set to 37 °C
Cling film	VWR	10713-916	
Compact Filter Holder	ThorLabs	DH1	Holds coverslip over mouse eye
Cx3cr1-GFP transgenic mice (B6.129P2(Cg)-Cx3cr1tm1Litt/J)	The Jackson Laboratory	005582	
DAQ controller chassis	National Instruments	PXIe-1073	
Data acquisition device	National Instruments	BNC-2090A	
Evans Blue dye	Fisher Scientific	AAA1677409	
FPGA module with digitizer	National Instruments	NI-5734	
Gas Evacuation Apparatus	RWD Life Science	R546W	
GenTeal Severe lubricant eye gel	Alcon	(from local pharmacy)	For use during imaging
GFP/Red filter cube	Chroma	custom	535/30, 560 long pass, 605/70
Heating pad	McKesson Medical and Surgical	190147	
HyperScope Launch Optics for use with Pockels Cell	Scientifica	S-MP-101080	
HyperScope Main module	Scientifica	S-MP-100466	

HyperScope Scan Path	Scientifica	S-MP-100406	
HyperScope X galvo Module	Scientifica	MP-100443	
ImageJ Fiji software		Freeware	
Isoflurane	Patterson Veterinary	NDC 14043-704-06	
Isoflurane gas filter cannister (active scavenging)	RWD Life Science	R510-31	
Isoflurane gas filter cannister (passive scavenging)	RWD Life Science	R510-31S	
ketamine HCl (100 mg/mL)	Vedco	NDC 50989-161-06	
M32 to M26 adapter	ThorLabs	M32M26S	
MaiTai GUI software	Spectra-Physics	NA	
MATLAB software	MathWorks	NA	R2015b
meloxicam (5 mg/mL)	Boehringer Ingelheim	NDC 0010-6013-01	Analgesic
Micorscope Objective	Edmund Optics	46-404	Mitutoyo WE715042319
micropipette puller	Sutter	Flaming/Brown Model P-97	
Mineral oil	Fisher	BP2629-1	
Mini bulldog hemostatic clamp	Fine Science Tools	18053-28	
Miniature EVA Tubing 0.02" ID, 0.06" OD	McMaster Carr	1883T1	
Miniature EVA Tubing 0.05" ID, 0.09" OD	McMaster Carr	1883T4	
Mouse head holder	Narishige	SGM-4	
No. 5 Forceps	Fine Science Tools	11251-10	
Optic Posts 1/2"	ThorLabs	TR3-P5	
Optical power meter kit	ThorLabs	PM100D	
pE-300 Ultra LLG Deivery	Scientifica	COO-LED3ULLGs	
Phenylephrine hydrochloride	Sigma	P6126	For pupil dilator solution
Pockels cell	Conoptics	350-80-02	
Pockels cell amplifier	Conoptics	Model 302RM	
Proparacaine hydrochloride	Sigma	1571001	For eye immobilization
Red & Far Red short pass filter Cube	Chroma	custom	560 short pass
Rotating 1/2" post clamp	ThorLabs	SWC	
ScanImage package	Vidrio Technologies	Freeware	Image acquisition software; Version 5.4.0 (2018); requires MATLAB
sodium chloride solution, sterile (0.9%)	Fresenius Kabi	NDC 63323-186-01	
Stereomicroscope	Leica	S9 E	
Tabletop centrifuge	Oxford	Benchmate C8	
Terramycin oxytetracycline/polymyxin B antibiotic ophthalmic ointment	Zoetis	NA	For use after intravitreal injection
ThermoRack cooling system	Solid State Cooling Systems	ThermoRack 401	Set to 20 °C
Ultrafast Ti:Sapphire laser	Spectra-Physics	Mai Tai DeepSee	
Vgat-Cre transgenic mice (Slc32a1tm2(cre)Lowl/J)	The Jackson Laboratory	016962	
VGlut2-Cre transgenic mice (Slc17a6tm2(cre)Lowl/J)	The Jackson Laboratory	016963	
VivoScope for In Vivo Imaging	Scientifica	S-MPVS-1200-00P	
White petrolatum-mineral oil lubricant eye ointment	Stye	NA	For use after imaging
xylazine HCl (20 mg/mL)	Akorn	NDC 59399-110-20	