

Materials List for:

Ex Vivo Optogenetic Dissection of Fear Circuits in Brain Slices

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Materials

Name	Company	Catalog Number	Comments
Surgery			
Stereotactic frame	Stoelting, USA	51670	can be replaced by other stereotactic frame for mice
Stereotoxic frame mouse adaptor	Stoelting, USA	51625	can be replaced by other stereotactic frame for mice
Gas anesthesia mask for mice	Stoelting, USA	50264	no longer available, replaced by item no. 51609M
Pressure injection device, Toohey Spritzer	Toohey Company, USA	T25-2-900	other pressure injection devices (e.g. Picospritzer) can be used
Kwik Fill glass capillaries	World Precision Instruments, Germany	1B150F-4	
Anesthesia machine, IsoFlo	Eickemeyer, Germany	213261	
DC Temperature Controller and heating pad	FHC, USA	40-90-8D	
Horizontal Micropipette Puller Model P-1000	Sutter Instruments, USA	P-1000	
Surgical tool sterilizer, Sterilizator 75	Melag, Germany	08754200	
rAAV-hSyn-ChR2(H134R)-eYFP (serotype 2/9)	Penn Vector Core, USA	AV-9-26973P	
rAAV-CAGh-ChR2(H134R)-mCherry (serotype 2/9)	Penn Vector Core, USA	AV-9-20938M	
rAAV-EF1a-DIOhChR2(H134R)-YFP (serotype 2/1)	Penn Vector Core, USA	AV-1-20298P	
fast green	Roth, Germany	0301.1	
Isoflurane Anesthetic, Isofluran CP (1ml/ml)	CP Pharma, Germany		
Antiseptic, Betadine (povidone-iodine)	Purdure Products, USA	BSOL32	can be replaced by other disinfectant
Analgesic, Metacam Solution (5mg/ml meloxicam)	Boehringer Ingelheim, Germany		can be replaced by other analgesics
Bepanthen eye ointment	Bayer, Germany	0191	can be replaced by other eye ointment
Drill NM3000 (SNKG1341 and SNIH1681)	Nouvag, Switzerland		
Sutranox Suture Needle	Fine Science Tools, Germany	12050-01	
Braided Silk Suture	Fine Science Tools, Germany	18020-60	
Recordings, light stimulation, and analysis			
artificial cerebrospinal fluid (ACSF)	for composition see references #16 and #23		

internal patch solutions	for composition see references #16 and #23		
MagnesiumSulfate Heptahydrate	Roth, Germany	P027.1	prepare 2M stock solution in purified water
Slicer, Microm HM650V	Fisher Scientific, Germany	920120	
Cooling unit for tissue slicer, CU65	Fisher Scientific, Germany	770180	
Sapphire blade	Delaware Diamond Knives		custom order, inquire with company
Stereoscope, SZX2-RFA16	Olympus, Japan		
Xcite fluorescent lamp (XI120Q-1492)	Lumen Dynamics Group, Canada	2012-12699	
Patch microscope, BX51WI	Olympus, Japan		
Multiclamp 700B patch amplifier	Molecular Devices, USA		
Digitdata 1440A	Molecular Devices, USA		
PClamp software, Version 10	Molecular Devices, USA		used to control data acquisition and stimulation
Bath temperature controler, TC05	Luigs & Neumann, Germany	200-100 500 0145	
Three axis micromanipulator Mini 25	Luigs & Neumann, Germany	210-100 000 0010	
Micromanipulator controller SM7	Luigs & Neumann, Germany	200-100 900 7311	
glass capillaries for patch pipettes	World Precision Instruments, Germany	GB150F-8P	
Cellulose nitrate filterpaper for interface chamber	Satorius Stedim Biotech, Germany	13006--50----ACN	
LED unit, CoolLED pE	CoolLED, UK	244-1400	CoolLED or USL 70/470 and appropriate adapters are two alternative choices for LED stimulation
CoolLED 100 Dual Adapt	CoolLED, UK	pE-ADAPTOR-50E	CoolLED or USL 70/470 and appropriate adapters are two alternative choices for LED stimulation
LED unit, USL 70/470	Rapp Optoelectronic	L70-000	CoolLED or USL 70/470 and appropriate adapters are two alternative choices for LED stimulation
Dual port adapter	Rapp Optoelectronic	inquire with company	CoolLED or USL 70/470 and appropriate adapters are two alternative choices for LED stimulation
Filter set red (excitation)	AHF, Germany	F49-560	Filters can be bought as set F46-008
(beamsplitter)	AHF, Germany	F48-585	Filters can be bought as set F46-008
(emission)	AHF, Germany	F47-630	Filters can be bought as set F46-008
Filter set green (excitation)	AHF, Germany	F39-472	Alternatives: filterset F36-149 or F46-002 (with bandpass emission)
(beamsplitter)	AHF, Germany	F43-495W	Alternatives: filterset F36-149 or F46-002 (with bandpass emission)
(emission)	AHF, Germany	F76-490	Alternatives: filterset F36-149 or F46-002 (with bandpass emission)
LaserCheck, handheld power meter	Coherent, USA	1098293	

IgorPro Software, Version 6	Wavemetrics, USA		for electrophysiology data analysis, other alternative software packages can also be used
Neuromatic suite of macros for IgorPro	http://www.neuromatic.thinkrandom.com		for electrophysiology data analysis, other alternative software packages can also be used
Post hoc analysis of injections and projections			
Paraformaldehyde powder (PFA)	Roth, Germany	0335.2	
Neurotrace 435/455 blue fluorescent Nissl stain	Invitrogen	N-21479	
agar-agar for embedding and resectioning	Roth, Germany	5210.3	
30 x 10 mm petri dishes for embedding	SPL Life Sciences		alternatives can be used
Slides, Super Frost	R. Langenbrinck, Germany	61303802	alternatives can be used
cover slips	R. Langenbrinck, Germany	3000302	alternatives can be used
Vecta Shield mounting medium	Vector Laboratories, USA	H-1000	alternative mounting media can be used
cellulose nitrate filter for flattening slices for fixation	Satorius Stedim Biotech, Germany	11406--25-----N	
Confocal Laser Scanning Microscope LSM 710	Zeiss, Germany		