

Materials List for:

Optogenetic Stimulation of the Auditory Nerve

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Materials

Name	Company	Catalog Number	Comments
Urethane	Sigma Aldrich	U2500-100G	Anesthetic
Xylazine HCl	RXV		Sedative and analgesic
Buprenorphine	Reckitt Benckiser		Analgesic
Dumont #5 Forceps	Fine Science Tools	11251-10	It is used to hold hard tissue, e.g. bone or materials. Never use them to hold soft delicate tissue
Dumont #5 - Fine Forceps	Fine Science Tools	11254-20	Only to be used to hold soft tissue
Fine Scissors - Sharp	Fine Science Tools	14060-09	To open the skin and help with the muscle dissection
Lempert Rongeurs	Fine Science Tools	16004-16	They are very useful to easily remove the bone from the bulla
473 nm laser	Changchun New Industries	MLL-III473	100 mW solid state 473 nm laser
Laser driver	Changchun New Industries	DPSSL MLL 100 mW	TTL operated laser driver
250 µm optical fiber	Any comercial ; e.g. Thorlabs	M42L05	
Acousto-optical modulator	Crystal Technology, Inc.	PCAOM VIS	Control the amount of light coupled into the fiber from the laser
Controller for Acousto-optical modulator	Crystal Technology, Inc.	160T1-8SAR-24-0.8	Control the acousto-optic modulator
Solo2 laser power & energy meter	Gentec-EO		Used to measure light intensity of the LED and the fiber coupled laser
Blue µLED	Cree	C470UT200	It is necessary to build several µLED devices because easily get damaged or the isolation is not good enough
TDT System	Tucker-Davis Technologies	RZ6-A-P1	It can be used any system for stimulus generation presentation and data acquisition
Single-shank, 16-channel silicon probe	Neuronexus	a1x16-5mm-100-177-CM16LP	These are fragile devises, must be handled carefully and cleaned after use
Omnidrill	World Precision Instruments	503598	Perform craniotomy for IC recordings and reference screw implantation
Micro Drill Steel Burrs	any commercial; e.g. Fine Science Tools	19007-07	
Self tapping bone screw	any commercial; e.g. Fine Science Tools	19010-10	Reference screw

Micromanipulator	any commercial; e.g. Luigs +NeumannInVivo Unit Junior 4 axis		Positioning of recording probe
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