

Materials List for:

In Vivo Intracerebral Stereotaxic Injections for Optogenetic Stimulation of Long-Range Inputs in Mouse Brain Slices

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Materials

Name	Company	Catalog Number	Comments
0.5 mm bur	Harvard Apparatus	724962	
10 µL Hamilton syringe	Hamilton	1701 RN - 7653-01	
10X PBS solution	ThermoFisher Scientific	AM9624	text
36% PFA	Sigma-Aldrich	F8775	
470 nm LED	Cairn Research	P1105/470/LED DC/59022m	use with matched excitation filter 470/40x and emission filter for GFP
AAV5.Syn.Chronos-GFP.WPRE.bGH	Penn Vector Core	AV-5-PV3446	lot V6026R, qTiter GC/ml 4.912e12, ddTiter GC/ml 2.456e13
All chemicals	Sigma		
Bath temperature controller	Luigs & Neumann	SM7	Set at 34°C
beveled metal needle	Hamilton	7803-05	33 gauge, 13mm, point style 4-20°
Big scissors	Dahle Allround	50038	
Biocytin	Sigma	B4261	final 1-3 mg/ml
Borosilicate Capillaries	Harvard Apparatus	GC150-10	1.5 mm outer, 0.86 inner diameter
Brown Flaming electrode puller	Sutter Instruments	P-87	
BupH Phosphate Buffered Saline pack	ThermoFisher Scientific	28372	
butterfly needle for perfusion	Braun	Venofix A	24G
CCD Camera	Andor	DL-604M	
Confocal Microscope	Zeiss	LSM710	20X
curved forceps	FST	11011-17	
CY5 configuration (confocal)			Helium-Neon 633nm (5,0 mW) laser; Mirror: MBS 488/561/633
CY5 configuration (epifluo)	Nikon/Chroma		Fluorescent light (Intensilight); Excitation filter: BP645/30; Dichroic mirror: 89100 BS ; Emission filter: BP705/72
DAPI	Sigma	D9542	
DAPI configuration (epifluo)	Nikon/Chroma		Fluorescent light (Intensilight); Cube: Semrock Set DAPI-5060C-000-ZERO (Excitation: BP 377/50; Mirror: BS 409; Emission: BP 447/60)
Digidata 1440A	Axon Instruments		
Digital handheld optical meter	ThorLabs	PM100D	Parametered on 475 nm

Double edge stainless steel razor blades	Electron Microscopy Sciences	72000	Use half of the blade in the slicer
Dual Fluorescent Protein Flashlight	Nightsea	DFP-1	excitation, 440-460 nm; emission filter on glasses, 500 nm longpass.
EGTA	Sigma	E4368	final 0,2 mM
Epifluorescence Microscope	Nikon	Eclipse TE-2000E	10 or 20X
Filter paper	Whatman		
Fluoro-Ruby 10%	Millipore	AG335	dissolve 10 mg in 100 µl of distilled water ; inject 150 to 300 nl
GFP configuration (epifluo)	Nikon/Chroma		Fluorescent light (Intensilight); Cube: Filter Set Nikon B-2E/C FITC (Excitation: BP 465-495; Mirror: BS 505; Emission: BP 515-555)
Heatingplate	Physitemp	HP4M	
Heparin choay 5000 U.I./ml	Sanofi		5 ml vial
HEPES	Sigma	H3375	final 10 mM
High speed rotary micromotor kit	Foredom	K.1070	maximum drill speed 38,000 rpm
Internal solution compounds :			
Isolated Pulse Stimulator	A-M Systems	2100	
KCl	Sigma	P4504	final 1,2 mM
Ketamine 1000	Virbac		
Ketofen 10%	Merial		100 mg/ml : dilute 1 µl in 1ml total (0,1%)
Laocaine (lidocaine)	MSD		16,22 mg/ml : dilute 1 ml in 4 ml total (around 4%)
LED hi power spot for surgery	Photonic (via Phymep)	10044	
LED Power Supply	Cairn Research	OptoLED Light Source	
Manipulators	Luigs & Neumann	SM-7	
Mg-ATP 2H2O	Sigma	A9187	final 4 mM
MgCl2	Sigma	63069	final 2 mM
Micro temperature controler	Physitemp	MTC-1	
Milk powder	Carnation		
MultiClamp 700B	Axon Instruments		
Na Phosphocreatine	Sigma	P7936	final 10 mM
Na3-GTP 2H2O	Sigma	G9002	final 0.4 mM
needle holder/hemostat	FST	13005-14	
pClamp acquisition software	Axon Instruments		
Peristaltic pump	Gilson	Minipuls 3	14-16 on the display for 2-3 ml/min
Potassium gluconate (K-gluconate)	Sigma	G4500	Final 135 mM
ProLong Gold antifade mounting medium	Thermofisher Scientific	P36390	
Rompun 2% (xylazine)	Bayer		
small scissors	FST	14060-09	
Sodium chloride 0.9%	Virbac		dilute 8.5 mL in 10 ml total
Stereomicroscope VISISCOPE SZT	VWR	630-1584	
Stereotaxic frame with digital display	Kopf	Model 940	Small animal stereotaxic instrument
Streptavidin-Cy3 conjugate	Life technologies	434315	

Streptavidin-Cy5 conjugate	ThermoFisher Scientific	S32357	
Superglue3 Loctite	Dutscher	999227	1g tube
Suture filament Ethilon II 4-0 polyamid	Ethicon	F3210	
Syringe pump	kdScientific	Legato 130 - 788130	Use Infuse and Withdraw modes
Tissue slicer	Leica	VT1200S	speed 0.07, amplitude 1.
tubing	Gilson	F117942, F117946	Yellow/Black, Purple/Black
upright microscope	Olympus	BX51W1	
Versi-dry bench absorbant paper	Nalgene		