

Materials List for:

# Laser-guided Neuronal Tracing In Brain Explants

Otto Albrecht<sup>1</sup>, Achim Klug<sup>1</sup>

<sup>1</sup>Department of Physiology and Biophysics, University of Colorado School of Medicine

Correspondence to: Otto Albrecht at [otto.albrecht@ucdenver.edu](mailto:otto.albrecht@ucdenver.edu)

URL: <https://www.jove.com/video/53333>

DOI: [doi:10.3791/53333](https://doi.org/10.3791/53333)

## Materials

Name	Company	Catalog Number	Comments
Sodium chloride	Sigma-Aldrich	S7653	All chemicals are from Sigma-Aldrich, unless noted otherwise.
Potassium chloride		P9333	
Potassium phosphate monobasic		P5655	
Sodium phosphate di-basic		S907	
Magnesium chloride		M2670	
Calcium chloride		C5080	
Glucose		G7528	
Sodium bicarbonate		S6297	
Ascorbic acid		A4544	
Myo-inositol		I5125	
Sodium pyruvate		P2256	
Bovine serum albumine		A2153	optional, for additional (immuno)histochemistry
Triton-X-100		X100	optional, for additional (immuno)histochemistry
Poly(ethylene glycol), 8000 MW		P2139	optional, for brain clearing
Formamide	Fisher Scientific	F84	optional, for brain clearing
Choleratoxin subunit-b	Molecular Probes	C-34776 (Alexa 555)	
Dextrane tetramethyl-rhodamine	Molecular Probes	D-7162 (Alexa 555)	
Fluorescent Nissl	Invitrogen	N-21479 (blue)	optional
Paraformaldehyde	Fisher Scientific	SF93	
Agarose	Invitrogen	16520	
Fluoromount-G	Southern Biotech	0100-01	
Pentobarbi-tal	Vortech Pharmaceuticals	Fatal-Plus	
Borosilicate glass filaments	Harvard Apparatus	G150F-10	
Pipette puller	Zeitz Instruments, Germany	DMZ Universal Puller	
Perfusion setup	Custom-made		
Laser pointer	laserpointerpro.com, Hong Kong	HK-88007294 (405 nm)	
Filter/safety goggles	Dragon Lasers, China	LSG09 (band-pass 450-700 nm)	
Bionocular microscope	Wild Heerbrugg, Switzerland	Wild M3	Equipped with high-intensity illuminator (MI-150; Dolan-Jenner Inc.)
Picospritzer	Parker Instruments	Picospritzer III	
PC with installed MC Stimulus software	Multi Channel Sys-tems, Germany (software)		
2-channel stimulator	Multi Channel Sys-tems, Germany	STG-1002	

---

Stimulation isolation unit	A.M.P.I., Israel	Iso-Flex	
Micromanipulator	Narishige, Japan	YOU-1	
Vibratome	Leica, Germany	VT1000S	