

Materials List for:

Retrograde Fluorescent Labeling Allows for Targeted Extracellular Single-unit Recording from Identified Neurons *In vivo*

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Materials

| Name | Company | Catalog Number | Comments |
|------------------------------------|-----------------------------|-----------------------------|---|
| Tricaine Methanesulfonate | Sigma-Aldrich | E10521 | MS-222 |
| Gallamine Triethiodide | Sigma-Aldrich | G8134 | Flaxedil |
| Lidocaine Hydrochloride | Sigma-Aldrich | L5647 | |
| Hickman's Ringer Solution | NA | NA | NaCl (6.48 g/l), KCl (0.15 g/l), CaCl ₂ ·2H ₂ O (0.29 g/l), MgSO ₄ (0.12 g/l), NaHCO ₃ (0.084 g/l), NaH ₂ PO ₄ (0.06 g/l) |
| Peristaltic Pump | Gilson or Rainin | Minipulse 3 Model 312; RP-1 | 10.0 ± 1.0 rpm, Alternatively, a gravity-fed line with a flow-meter |
| Dissection Microscope | Nikon | SM2645 | |
| Super Glue | Super Glue Corporation | SGH2 | 2g tube |
| Omni Drill 35 | World Precision Instruments | 503-598 | |
| Ball Mill Carbide Drill Bit #1/4 | World Precision Instruments | 501860 | 0.19 DIA (bit diameter = 0.48 mm) |
| Low Temp Cautery Kit | World Precision Instruments | 500391 | |
| Manual Micromanipulator | World Precision Instruments | M3301R | |
| Dextran Conjugated Alexa Fluor 568 | Invitrogen | D-22912 | 2mM concentration; 10,000MW The choice of dye wavelength should be selected to match the microscope filter settings |
| Epifluorescent Microscope | Nikon | E600 FN | A remote focus accessory is helpful for fine focus TRITC filter - or appropriate filter to match focal planes for different dye wavelengths |
| Low Power Objective | Nikon | 93182 | CFI Plan Achromat Series, 4X N.A. 0.1, W.D. 30mm |
| High Power Objective | Nikon | 93148 | CFI Fluor Series, 40X WI N.A. 0.8, W.D. 2.0 mm |
| White Light Source | Dolan-Jenner | Model 190 | Fiber Optic Illuminator |
| Fluorescent Light Source | Lumen Dynamics | X-Cite 120Q | |
| Low-light Level Camera | Photometrics | CoolSnap ES | |
| Digital Manometer | Omega Engineering | HHP-201 | |
| Motorized Micromanipulator | Sutter Instruments | MP-285 | |
| Headstage | Molecular Devices | CV-7B | Axon Instruments |
| Amplifier | Molecular Devices | MultiClamp 700B | Axon Instruments |
| Data Acquisition System | Molecular Devices | Digidata 1322A | Axon Instruments |

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|-----------------------------------|-----------------------------|----------|--|
| Isolated Pulse Stimulator | A-M Systems | 2100 | |
| Flaming/Brown Micropipette Puller | Sutter Instruments | P-97 | Program settings for our application: Heat: ramp + 1, Pull: '0', Velocity: 60, Time: 90 Box filament |
| Pipette Glass | World Precision Instruments | 1B100F-4 | Borosilicate capillary glass with filament (1 mm OD, 0.58 mm ID) |