

Materials List for:

Isolation of Sensory Neurons of *Aplysia californica* for Patch Clamp Recordings of Glutamatergic Currents

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Materials

Name	Company	Catalog Number	Comments
Artificial seawater ASW	Sigma-Aldrich	assorted	(mM): 417 NaCl, 10 KCl, 10 CaCl ₂ (2 H ₂ O), 5MgCl ₂ (6H ₂ O), 15 HEPES-NaOH, pH 7.6
Intracellular solution	Sigma	assorted	(mM): 450 KCl, 2.9 CaCl ₂ (2 H ₂ O), 2.5 MgCl ₂ (6 H ₂ O), 5 Na ₂ ATP, 10 EGTA, and 40 HEPES-KOH, pH 7.4
Poly-D-lysine	Sigma	P6407	
penicillin/streptomycin added to ASW at 1:100	Lonzo Walkersville, Inc.	17-603E	5,000 Units/ml penicillin plus 5,000 mg/ml streptomycin
Neutral dispase II	Roche Diagnostics	10165859001	
hyaluronidase	Sigma-Aldrich	H4272	
collagenase type XI	Sigma-Aldrich	C9407	
L-Glutamate (L-Glu)	Sigma-Aldrich	49601-100G	
D-Aspartate (D-Asp)	Sigma-Aldrich	11200-10G	
N-methyl-D-aspartate (NMDA)	Biomol	100002-268	
L-Asp	Sigma	A6683-25G	
alpha-amino-3-hydroxyl-5-methyl-4-isoxazole-propionic acid (AMPA)	Sigma	A6816-5MG	
L-Glu R antagonists	various	various	
agar			
kynurenate	Sigma-Aldrich	61250	
APV	Sigma-Aldrich	A5282	
DL-2-Amino-5-phosphonopentanoic acid (NMDAR antagonist)			
2-propanol	VWRSP	BDH1133	
Chloriding solution	Sigma	assorted	25 g FeCl ₃ + 25 ml concentrated HCl + 50 ml H ₂ O
Sylgard silicone 2-part polymer	World Precision Instruments (WPI)	SYL184	Provides pin-out surface for small dissection dishes
0-40x zoom magnification microscope for dissections	Wild		
Techniquip 150 Watts Fiber Optic Illuminator	Microoptics of Florida	TQ FOI-150	
RotoMix 50800 orbital mixer			

Nikon Diaphot inverted phase-contrast microscope with 4x, 20x (optional) & 40x objectives	SR Research Ltd.	Eyelink II	
Tektronix digital oscilloscope	SR Research Ltd.		
pClamp 10 data acquisition and analysis software	Molecular Devices		
PC with Windows XP or higher operating system	PC Solutions		Thinkserver with solid state hard drives (80GB) and low noise monitors
Flaming/Brown P87 micropipette puller	Sutter Instruments, Novato, CA		
Axon Instruments Axopatch 200B clamp amplifier with a capacitance compensation range of 1-1000 pF; preamplifier	Molecular Devices, Sunnyvale, CA		
Axon instruments electrode holder assembly for Axopatch 200B preamplifier	Molecular Devices, Sunnyvale, CA	CV203BU	
Digidata 1200 A/D converter	Molecular Devices, Sunnyvale, CA		
Picospritzer, powered by N2 adjustable for pressure and duration	Parker Hannifin, Cleveland, OH		
TMC Micro-G Vibration isolation table	Ametek		
Faraday cage			custom manufacture
Burleigh Piezoelectric Clamshell Micromanipulators	Burleigh Instruments; Thorlabs		presently PCS-5000; -6000 series + mounts
Narishige M-152 manual manipulators (for perfusion system and picospritzer)	Narishige USA		
Filament pipette glass, 1.5 mm OD, 0.84 mm ID - 3 inch length	WPI	1B150-3	
Ag/AgCl half cell	WPI	EP4	
15 ml centrifuge tubes, 35-2097 BD Falcon® Centrifuge Tubes	VWRSP	21008-918	
Angled Scissors	Fine Science Tools	15006-09	
Dumostar Fine forceps	Fine Science Tools	11295-00	
35 mm falcon tissue culture dishes	VWRSP	25382-064	
falcon 150 x 25 mm tissue culture dishes; 1013	VWRSP	1013	also can be made into small dissection dishes with sylgard
sylgard	WPI	SYL184	
animal dissection tray	various		
15 ml centrifuge tubes, 35-2097 BD Falcon	VWRSP	21008-918	For 6-bore gravity-fed perfusion system
Aluminum clips with screw hole ends	hardware store		For perfusion system
23 gauge needles (manually file off points)	VWRSP		For perfusion system
Polyethylene tubing 0.022"ID x 0.042"OD; 427411	Becton-Dickinson		For perfusion system
H-7 pipette stand/holder for microcap perfusion array	Narishige USA		For perfusion system
one-way valves			For perfusion system

Drummond Microcaps 1 µl	VWRSP		For perfusion system
18 gauge needles for suction (filed off points)			
Polyethylene tubing	Cole Parmer	4.27436E+11	
fine dissection pins	Fine Science Tools	26002-20	
capillary tubes	Kimble 71900-100		fire-polished and U-shaped in a Bunsen burner flame and filled with 3% agar in ECS
modeling clay	craft store		
dish holder for microscope stage with isolated ground bath			Custom manufacture
pasteur pipettes	VWRSP	14672-412	
pipette bulbs	VWRSP	53283-911	
acrodisk syringe filters	VWRSP	28144-040	
thick-walled 1.5 mm diameter borosilicate filament glass	WPI	1B150F-3	
High purity nitrogen cylinder and bifurcating regulator			

Tables 1-3. Lists of Reagents, Materials, and Equipment.