

Materials List for:

Dissection and Immunofluorescent Staining of Mushroom Body and Photoreceptor Neurons in Adult *Drosophila melanogaster* Brains

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Materials

Name	Company	Catalog Number	Comments
Microdissection forceps/tweezers	Ted Pella	505-NM	
Sylgard dishes	Living Systems Instrumentation	DD-50-S-BLK	Available from amazon.com
Fas2 Antibody	Developmental Studies Hybridoma Bank	1D4	
Chaoptin Antibody	Developmental Studies Hybridoma Bank	24B10	
GFP Antibody	Aves Lab	GFP-1010	
Alexa488 goat anti-mouse secondary antibody	ThermoFisher	A-11001	
Alexa488 goat anti-chicken secondary antibody	ThermoFisher	A-11039	
Alexa647 goat anti-mouse secondary antibody	ThermoFisher	A-21236	
20% paraformaldehyde	Electron Microscope Services	RT15713	
VectaShield	Vector Labs	H-1000	
SuperFrost Plus Slides	ThermoFisher	99-910-01	
Coverslips	ThermoFisher	12-553-454	
Na Phosphate Buffer monobasic	Sigma	S3139	
Na phosphate Buffer dibasic	Sigma	S3264	
Triton X 100	Sigma	X100-100ml	
fingernail polish	Electron Microscope Services (EMS)	72180	
stereomicroscope	Leica S6D with KL300 LED light source		
9-well dish (spot plate)	VWR	89090-482	
nutator/rocker	Fisher	22-363-152 or 88-861-041	
35mm dish	Genesee Scientific	32-103	
Sylgard	Fisher	50-366-794	
Kimwipe	Fisher	06-666	
Name	Company	Catalog Number	Comments
Potential Fixation Buffers			
PTN Buffer			0.1M NaPhosphate, pH 7.2, 0.1% Triton-X-100, Typically make up 0.5 L of 0.1M NaPhosphate buffer and aliquote 50ml at a time as needed

PLP buffer			2% paraformaldehyde, 0.01M NaIO ₄ , 0.075M Lysine, 0.037M NaPO ₄ , pH 7.2, Dissolve 0.36 g lysine in 10 ml H ₂ O + 7.5 ml 0.1 M NaH ₂ PO ₄ pH 7.2 + 2.5 ml 0.1 M Na ₂ HPO ₄ on ice. Immediately before use, mix 15 ml of this buffered lysine solution with 50 mg NaIO ₄ (sodium periodate) + 2ml of the 20% high grade paraformaldehyde (EMS) + 3ml H ₂ O
PEM buffer			0.1M PIPES pH 7.0, 2mM MgSO ₄ , 1mM EGTA, This buffer can be conveniently made as a 2x stock and diluted with 8% paraformaldehyde (PFA) to give a final concentration of 4% PFA
Name	Company	Catalog Number	Comments
Fly Stocks available from Bloomington			
elav (c155)-GAL4		BL458	Pan-neuronal GAL4 driver
w*;;OK107-GAL4		BL 854	GAL4 driver for all mushroom body neurons (OK107-GAL4 insertion is on the 4th chromosome)
y(1), w(67c23); c739-GAL4		BL 7362	GAL4 driver for alpha and beta lobes (on 2nd chromosome)
y(1), w(67c23); c739-GAL4, UAS-CD8-GFP		BL 64305	GAL4 driver for alpha and beta lobes, also contains UAS-CD8-GFP
w*; 201Y-GAL4		BL 4440	GAL4 driver for primarily the gamma lobes of mushroom body (on 2nd chromosome)
y(1), w(67c23); 201Y-GAL4, UAS-CD8-GFP		BL 64296	GAL4 driver for mushroom body gamma lobes, also contains UAS-CD8-GFP
w*, elav (c155)-GAL4, hsFLP; FRTG13, Tub>Gal80/CyO		BL 5145	MARCM stock, contains FRT site and GAL80 on 2nd chromosome
w*, elav (c155)-GAL4, hsFLP, UAS-CD8-GFP		BL5146	MARCM stock, contains hsFLP, pan-neuronal GAL4, and CD8-GFP on X chromosome
y(1), w*, hsFLP, UAS-CD8-GFP;;FRT82B, Tub>GAL80/TM3, Sb(1);OK107-GAL4		BL 44408	MARCM stock for flipping 3rd chromosome
y(1), w*, hsFLP, UAS-CD8-GFP;FRT40A, Tub>GAL80;OK107-GAL4		BL44406	MARCM stock for flipping 2nd chromosome
w*, hsFLP, tub>GAL80, FRT19A; UAS-CD8-GFP/CyO;;OK107-GAL4		BL 44407	MARCM stock for flipping X chromosome
y(1), w*; UAS-CD8-GFP/CyO		BL 5137	GFP labels cell surface (CD8 is a transmembrane protein)
y(1), w*; FRTG13, UAS-CD8-GFP		BL 5139	MARCM stock, contains FRT site and CD8-GFP on 2nd chromosome
y(1), w*, hsFLP, UAS-CD8-GFP; Pin(1)/CyO		BL 28832	MARCM stock, contains hsFLP and CD8-GFP on X chromosome
w*; FRTG13, Tub>GAL80		BL 5140	MARCM stock, contains FRT site and GAL80 on 2nd chromosome

y(1), w*;; FRT82B, Tub>GAL80		BL 5135	MARCM stock, contains FRT site and GAL80 on 3rd chromosome
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