

Materials List for

Analysis of Lipid Signaling in *Drosophila* Photoreceptors using Mass Spectrometry

Aniruddha Panda^{1,2}, Rajan Thakur^{1,3}, Aastha Kumari¹, Padinjat Raghu¹

¹National Centre for Biological Sciences-TIFR, GKVK Campus ²Department of Cell Biology, Yale University ³Department of Neuroscience, Brown University

Corresponding Author

Padinjat Raghu
praghu@ncbs.res.in

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jove.com/video/63516

Materials

Name	Company	Catalog Number	Comments
0.1 N methanolic HCL			For total lipid isolation
0.88% KCl	Sigma Aldrich	P9541	For total lipid isolation
1.5 ml / 2ml LoBind Eppendorf tubes	Eppendorf,	022431081/022431102	For total lipid isolation
2.3.18 16:0/18:1 Diether PE	Avanti polar lipids	999974	Lipid Internal Standard
37% pure HCl	Sigma Aldrich	320331	For total lipid isolation
96-well plate			Total Organic Phosphate assay
Acetone	Fisher Scientific	32005	For dissections
Ammonium molybdate			Total Organic Phosphate assay
Ascorbic Acid			Total Organic Phosphate assay
Bath sonicator			
BEH300 C18 column [1.0 mm x 100mm x 1.7 mm]	Waters India Pvt. Ltd.	186002352	LC
Blade holder	Fine Scientific Tools	10052-11	For dissections
BOD incubator			Total Organic Phosphate assay
Breakable blades	Fine Scientific tools	10050-00	For dissections
Butter paper	GE healthcare	10347671	For dissections
C4, 300 A ⁰ , [1.7 μm x1 mm x 100 mm] column	Waters India Pvt. Ltd.	186004623	LC
Chromatography amber color glass vials with inserts	Merck	27083-U	
d18:1/17:0)	Avanti polar lipids	860517	Lipid Internal Standard
d5-Phosphatidylinositol 3,5-bisphosphate [PI(3,5)P ₂]-16:0/16:0	Avanti polar lipids	850172	Lipid Internal Standard
Dissecting microscopes	Olympus	SZ51	For dissections
Dry heat bath.			
Eluent A			Hexane:Isopropyl alcohol:100 mM aqueous ammonium acetate (68:30:2), for LC

Eluent B			Hexane:Isopropyl alcohol:100 mM aqueous ammonium acetate (70:20:10), for LC
Filter paper	Indica-HM2	74039	For dissections
Flasks	Borosil		For dissections
Flies	NA	NA	Raghu Padinjat lab
Fly food	NA	NA	NCBS lab kitchen, composition: corn flour 80 g/L, D-glucose 20 g/L, sucrose 40 g/L, agar 8 g/L, yeast extract 15 g/L, propionic acid 4 mL, TEGO (methyl para hydroxybenzoate) 0.7 g/L, orthophosphoric acid 0.6 mL)
Forceps	Fine Scientific Tools	11254-20	For dissections
Fume hood			
Funnel	Borosil		For dissections
Glacial acetic acid	Fisher Scientific	A35-500	For derivatization
Glass bottles: transparent and amber color			For total lipid isolation
High-temperature-resistant phosphate-free glass tubes.			Total Organic Phosphate assay
Homogenization tubes with zirconium oxide beads			For total lipid isolation
Homogenizer instrument	Precellys		
Humidified CO ₂ connected to fly pads			For fly pushing
Illumination controlled incubators	Panasonic Sanyo	MIR-553	For fly rearing
Initial organic mixture			methanol:chloroform (2:1), For total lipid isolation
LC-MS grade Chloroform	Sigma Aldrich	650498	For total lipid isolation
LC-MS grade Methanol	Sigma Aldrich	34860	For total lipid isolation
LC-MS grade water	Sigma Aldrich	34877	For total lipid isolation
Light meter	HTC instruments	LX-103	
Low retention tips	Eppendorf	0030072006/72014/72022/72030	For total lipid isolation
LTQ Orbitrap XL instrument	Thermo Fisher Scientific, Bremen, Germany		
Lysophosphatidic acid (LPA)- 13:0	Avanti polar lipids	LM-1700	Lipid Internal Standard
Lysophosphatidic acid (LPA)- 17:1	Avanti polar lipids	LM 1701	Lipid Internal Standard
Lysophosphatidylcholine (LPC) -13:0	Avanti polar lipids	LM-1600	Lipid Internal Standard
Lysophosphatidylcholine (LPC) -17:1	Avanti polar lipids	855677	Lipid Internal Standard
Lysophosphatidylcholine (LPC)- 19:0	Avanti polar lipids	855776	Lipid Internal Standard
Perchloric acid.			Total Organic Phosphate assay
Phosphate standard potassium dihydrogen phosphate			Total Organic Phosphate assay
Phosphate-buffered saline (PBS)	NA	NA	Composition: 137mMNaCl, 2.7mM KCl, 10 mM Na ₂ HPO ₄ , and 1.8 mM KH ₂ PO ₄ , pH 7.4
Phosphatidic acid (PA)- 12:0/13:0	Avanti polar lipids	, LM-1400	Lipid Internal Standard
Phosphatidic acid (PA)- 17:0/14:1	Avanti polar lipids	LM-1404	Lipid Internal Standard
Phosphatidic acid (PA)-(17:0/17:0)	Avanti polar lipids	830856	Lipid Internal Standard
Phosphatidic acid (PA)-16:0-D31/18:1	Avanti polar lipids	860453	Lipid Internal Standard
Phosphatidylcholine (PC) -12:0/13:0	Avanti polar lipids	LM-1000	Lipid Internal Standard

Phosphatidylcholine (PC)- 17:0/14:1	Avanti polar lipids	LM-1004	Lipid Internal Standard
Phosphatidylethanolamine (PE) - 17:0/14:1	Avanti polar lipids	LM-110	Lipid Internal Standard
Phosphatidylinositol (PI) - 17:0/14:1	Avanti polar lipids	LM-1504	Lipid Internal Standard
Phosphatidylinositol 4,5-bisphosphate [PI(4,5)P ₂]-17:0/20:4	Avanti polar lipids	LM-1904	Lipid Internal Standard
Phosphatidylinositol 4-phosphate (PI4P) - 17:0/20:4	Avanti polar lipids	LM-1901	Lipid Internal Standard
Robotic nanoflow ion source	TriVersa NanoMate (Advion BioSciences, Ithaca, NY, USA)		
Rotospin instrument	Tarsons	3090X	
Silicone pads			For dissections
solvent A			0.1% formic acid in water, for LC
solvent B			0.1% formic acid in acetonitrile, for LC
Table-top centrifuge			
Thermo-mixer			
TMS-diazomethane	Acros	AC385330050	For derivatization
Triple quadrupole mass spectrometer	AB Sciex	QTRAP 6500	
UPLC system	Waters Acquity		
Vacuum centrifugal concentrator	Scanvac , Labogene		
Vortex machine			