Materials List for:

In Vivo Imaging of Dauer-specific Neuronal Remodeling in *C. elegans*

Nathan E. Schroeder[1], Kristen M. Flatt[1]

[1]Department of Crop Sciences, University of Illinois Urbana-Champaign

Correspondence to: Nathan E. Schroeder at nes@illinois.edu

URL: https://www.jove.com/video/51834
DOI: doi:10.3791/51834

Materials

Name	Company	Catalog Number	Comments
N2 *C. elegans* Bristol strain	Caenorhabditis Genetics Center		
PT2660 myIs13[P_{klp-6}::gfp] III	Upon request from Schroeder lab		
PT2762 myIs14[P_{klp-6}::gfp] V	Upon request from Schroeder lab		
JK2868 qIs56[P_{lag-2}::gfp] V	Caenorhabditis Genetics Center		
OP50 E. coli	Caenorhabditis Genetics Center		
Petri dishes	Tritech Research	60 mm T3308, 35 mm T3501	
NGM agar	Various		3 g NaCl, 17 g agar, 2.5 g peptone in 975 ml H_2O autoclaved cooled to 55°C followed by 1 ml of 5 mg/ml cholesterol in ethanol, 25 ml of 1 M KPO_4 buffer (pH 6.0), 1 ml of 1 M $CaCl_2$, 1 ml of 1 M $MgSO_4$
S Media	Various		S media consists of S basal solution (1.46 g NaCl, 0.25g K_2HPO_4, 1.5 g KH_2PO_4, 0.25 ml of 5 mg/ml cholesterol in ethanol and H_2O to 250 ml. Autoclaved.) To the S basal solution add 2.5 ml of potassium citrate pH 6.0 (2 g citric acid monohydrate, 29.4 g tri-potassium citrate monohydrate, H_2O to 100 ml, autoclaved), 2.5 ml of Trace Metals Solution (1.86 g disodium EDTA, 0.69 g $FeSO_4$ •7 H_2O, 0.2 g MnCl2•4 H_2O, 0.29 g $ZnSO_4$ •7 H_2O, 0.025 g $CuSO_4$ •5 H_2O, H_2O to 1 L. Autoclaved and stored in the dark), 0.75 ml of 1 M $CaCl_2$, and 0.75 ml of 1 M $MgSO_4$.
Dauer pheromone plates for dose-response assay	Various		Mix 0.085 g Noble agar, 0.5 ml of 0.513 M NaCl and 5 µl of 5 mg/ml cholesterol dissolved in ethanol in each of 6x 15 ml culture tubes. Add sufficient crude pheromone to each tube to create a range of concentrations. Add H_2O to bring the volume to 4.725 ml. Boil over a Bunsen burner until the agar is dissolved and then cool to 55 °C. Add 125 µl 1 M KPO_4 buffer (pH 6.0), 50 µl 0.1 M $CaCl_2$, 50 µl 0.1 M $MgSO_4$ and 50 µl of 5 mg/ml streptomycin sulfate to each tube. Pour the contents of each tube into a 35 mm diameter Petri dish. Let the agar solidify at room temperature overnight (if longer,

			store in enclosed container to prevent excessive drying).
Microsphere beads 0.1 micron	Polysciences Inc.	00876-15	
M9 buffer	Various		Mix 3 g KH_2PO_4, 6 g Na_2HPO_4, 5 g NaCl, 1 ml 1 M $MgSO_4$, H_2O to 1 liter. Sterilize by autoclaving

