

Materials List for

Controlled Semi-Automated Laser-Induced Injuries for Studying Spinal Cord Regeneration in Zebrafish Larvae

Francois El-Daher¹, Jason J. Early¹, Claire E. Richmond¹, Rory Jamieson¹, Thomas Becker^{1,2}, Catherina G. Becker^{1,2}

¹Centre for Discovery Brain Sciences, University of Edinburgh Medical School: Biomedical Sciences ²Center for Regenerative Therapies at the TU Dresden

Corresponding Author

Francois El-Daher
francois.el-daher@ed.ac.uk

Citation

El-Daher, F., Early, J.J., Richmond, C.E., Jamieson, R., Becker, T., Becker, C.G. Controlled Semi-Automated Laser-Induced Injuries for Studying Spinal Cord Regeneration in Zebrafish Larvae. *J. Vis. Exp.* (177), e63259, doi:10.3791/63259 (2021).

Date Published

November 22, 2021

DOI

10.3791/63259

URL

jove.com/video/63259

Materials

Name	Company	Catalog Number	Comments
Software			
Microscope software Zen Blue 2.0	Carl Zeiss		
ImageJ/FIJI	Open-Source		
Visual Studio Code	Microsoft		
Microscope and accessories			
ApoTome microscope	Carl Zeiss		
C-Plan-Apochromat 10X (0.5NA) dipping lens	Carl Zeiss		
dual AxioCam 506 m CCD cameras	Carl Zeiss		
Laser scanning confocal microscope LSM880	Carl Zeiss		
Spinning-disk module CSU-X1	Yokogawa		
Upright microscope Axio Examiner D1	Carl Zeiss		
UV laser	Micropoint		
VAST BioImager	Union Biometrica		
Labware			
90 mm Petri dish	Thermo-Fisher	101R20	
96-well plate	Corning	3841	
Chemicals			
Click-It EdU Imaging Kit	Invitrogen	C10637	
aminobenzoic-acid-ethyl methyl-ester (MS222)	Sigma-Aldrich	A5040	
phenylthiourea (PTU)	Sigma-Aldrich	P7629	
Antibodies			
Donkey anti-chicken Alexa Fluor 488	Jackson	703-545-155	
Donkey anti-mouse Cy3	Jackson	715-165-150	
Mouse anti-GFP	Abcam	AB13970	

Mouse anti-tubulin acetylated antibody	Sigma	T6793	
Transgenic zebrafish lines			
Tg(beta-actin:utrophin-mCherry)		N/A	Established by David Greenhald, University of Edinburgh
Tg(mnx1:gfp)		N/A	First described in [Flanagan-Steet et al. 2005]
Tg(Xla.Tubb:DsRed)		N/A	First described in [Peri and Nusslein-Volhard 2008]
Tg(Xla.Tubb:DsRed;mpeg1:GFP)		N/A	Established by Katy Reid, University of Edinburgh
Tg(Xla.Tubb:GCaMP6s)		N/A	Established by David Greenhald, University of Edinburgh