

Materials List for:

Micromanipulation of Gene Expression in the Adult Zebrafish Brain Using Cerebroventricular Microinjection of Morpholino Oligonucleotides

Caghan Kizil¹, Anne Iltzsche¹, Jan Kaslin¹, Michael Brand¹

¹DFG-Center for Regenerative Therapies Dresden, Cluster of Excellence (CRTD) and Biotechnology Center (BIOTEC) of the Technische Universität Dresden

Correspondence to: Caghan Kizil at caghan.kizil@crt-dresden.de, Michael Brand at Michael.Brand@biotec.tu-dresden.de

URL: <https://www.jove.com/video/50415>

DOI: [doi:10.3791/50415](https://doi.org/10.3791/50415)

Materials

Name	Company	Catalog Number	Comments
Reagent/Material			
CellTracker Red CMTPX	Life Technologies, Invitrogen	C34552	Use at 1:100 dilution for measuring the injection accuracy
MESAB (ethyl-m-aminobenzoate methanesulphonate)	Sigma-Aldrich	A5040	For anesthetizing the fish
Petri dishes	Sarstedt	821,472	For handling the fish during injection and imaging
Phosphate-buffered saline	Life Technologies, GIBCO	10010-056	As sterile dilution medium
Vivo morpholinos	Gene Tools Inc.	Customized	More info on vivo morpholinos: www.gene-tools.com
Equipment			
Barbed-end needle	Becton-Dickinson	305178	To generate the incision in the skull
Dissecting microscope	Olympus, Leica, Zeiss	Varies with the manufacturer	Part of the whole injection setup
Dumont Tweezers	World Precision Instruments	501985	To snap off the tip of the glass capillary
Fluorescence camera	Zeiss, Nikon, Leica	Varies with the manufacturer	To visualize the fluorescence after injection
Gillies Dissecting Forceps	World Precision Instruments	501265	To hold the fish in position
Glass injection capillaries	World Precision Instruments	TWF10	For microinjection
PicoNozzle kit (microinjector holder)	World Precision Instruments	5430-12	For microinjection
Pneumatic PicoPump (microinjector)	World Precision Instruments	SYS-PV820	For microinjection
Ring illuminator; Ring Light Guide	Parkland Scientific	ILL-RLG	For illuminating the specimen