

Three and Four-Dimensional Visualization and Analysis Approaches to Study Vertebrate Axial Elongation and Segmentation

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Citation

Dias, A., Martins, G.G., Lopes, A., Mallo, M. Three and Four-Dimensional Visualization and Analysis Approaches to Study Vertebrate Axial Elongation and Segmentation. *J. Vis. Exp.* (), e62086, doi:10.3791/62086 (2021).

Date Published

February 28, 2021

DOI

10.3791/62086

URL

jove.com/video/62086

Materials

Name	Company	Catalog Number	Comments
Agarose low gelling temperature	Sigma	A9414	Used to mounting embryos (e.g. for OPT)
Amira software	ThermoFisher	-	Commercial software tool
Anti-Brachyury (Goat polyclonal)	R and D Systems	AF2085 RRID:AB_2200235	For immunofluorescence
Anti-Sox2 (Rabbit monoclonal)	Abcam	ab92494 RRID:AB_10585428	For immunofluorescence
Anti-Tbx6 (Goat polyclonal)	R and D Systems	AF4744 RRID:AB_2200834	For immunofluorescence
Anti-Laminin111 (Rabbit polyclonal)	Sigma	L9393 RRID:AB_477163	For immunofluorescence
Anti-goat 488 (Donkey polyclonal)	Molecular Probes	A11055 RRID:AB_2534102	For immunofluorescence
Anti-rabbit 568 (Donkey polyclonal)	ThermoFisher Scientific	A10042 RRID:AB_2534017	For immunofluorescence
Benzyl Alcohol (99+%)	(any)	-	Used to clear embryos (component of BABB)
Benzyl Benzoate (99+%)	(any)	-	Used to clear embryos (component of BABB)
Bovine serum albumin	Biowest	P6154	For immunofluorescence
Coverglass 20x20 mm #0	(any)	-	100um thick
Coverglass 20x20 mm #1	(any)	-	170um thick
Coverglass 20x60 mm #1.5	(any)	-	To use as "slides"
DAPI (4',6-Diamidino-2-Phenylindole Dihydrochloride)	Life Technologies	D3571	For immunofluorescence
Drishti software	(open source)	-	Free software tool
EDTA	Sigma	ED2SS	For demineralization
Fiji/ImageJ software	(open source)	-	Free software tool
Glycine	NZYtech	MB01401	For immunofluorescence
Huygens software	Scientific Volume Imaging	-	Commercial software tool
HyClone defined fetal bovine serum	GE Healthcare	#HYCLSH30070.03	For live imaging
Hydrogen peroxide solution 30 %	Millipore	1085971000	For clearing
Imaris software	Bitplane / Oxford instruments	-	Commercial software tool

iSpacers	SunJin Lab	(varies)	Use as spacers for preparations
L-glutamine	Gibco	#25030-024	For live imaging medium
Low glucose DMEM	Gibco	11054020	For live imaging medium
M2 medium	Sigma	M7167	To dissect embryos
Methanol	VWR	VWRC20847.307	For dehydration and rehydration steps
Methyl salicylate	Sigma	M6752	Used to clear embryos
Paraformaldehyde	Sigma	P6148	Used in solution to fix embryos
Penicillin-streptomycin	Sigma	#P0781	For live imaging medium
PBS (Phosphate-buffered saline solution)	Biowest	L0615-500	-
RapiClear	SunJin Laboratory	RapiClear 1.52	Used to clear embryos
Secure-Sea hybridization chambers	Sigma	C5474	Use as spacers for preparations
simLab software	SimLab soft	-	Commercial software tool
Slide, depression concave glass - 75x25 mm	(any)	-	To mount thick embryos.
Triton X-100	Sigma	T8787	For immunofluorescence