

Materials List for:

Light-sheet Fluorescence Microscopy to Capture 4-Dimensional Images of the Effects of Modulating Shear Stress on the Developing Zebrafish Heart

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Materials

Name	Company	Catalog Number	Comments
Clontech Hifi PCR pre-mix	Takara	639298	PCR mastermix 1.1.1.1, 1.1.1.2, 1.1.1.5, 1.1.2.1, 3.1.4
Human <i>Nrg1</i> cDNA	Gift from William Talbot, Stanford University, Stanford, California, USA	N/A	Used for trabeculation rescue 1.1.1.3, 1.1.1.4, 1.1.2.1
CFX Connect™ Real-Time PCR Detection System	Bio-Rad	1855201	PCR Machine 1.1.1.5, 1.1.1.6, 1.1.2.2, 1.1.3.2
pCS2+	GE Health		Plasmid used to synthesize mRNA 1.1.2.1, 1.1.2.4, 1.1.2.5
Nucleospin purification kit	Clontech	740609.25	DNA Purification 1.1.2.3, 1.1.2.4, 1.1.6.2
T4 DNA ligase	Clontech	2011A	PCR Ligation solution 1.1.2.5
Stellar competent cells	Clontech	636763	<i>E. coli</i> cells used for transformation 1.1.2.6, 1.1.3.1, 1.1.3.2
Lipofectamine 2000 transfection reagent	Life Technologies	11668027	Transfection reagent 1.1.4
mMessage SP6 kit	Invitrogen	AM1340	Kit used to synthesize mRNA 1.1.6.3
Aurum Total RNA Mini Kit	Bio-Rad	7326820	Purifies RNA 1.1.6.4, 3.1.2
GeneTools 4.3.8	GeneTools	N/A	Software for primer design 1.2.1, 3.1.3
EPO cDNA	Creative Biogene	CDFH006026	Increases WSS 1.2.2, 1.2.3, 1.1.7
AG1478	Sigma-Aldrich	T4182	ErbB inhibitor 1.3.1
E3 medium			To grow embryos 1.3.1, 1.3.2, 5.1.5
DAPT	Sigma-Aldrich	D5942	γ-secretase inhibitor 1.3.2
Agarose	Sigma-Aldrich	A9539	Used for mounting embryos 2.1.1.1
ORCA-Flash4.0 LT Digital CMOS camera	Hamamatsu Photonics	C11440-42U	Used to capture Images 2.1.1.2, 2.1.1.3

Amira Software	FEI Software	N/A	Visualized and Analysed images into 3D, and 4D 2.1.5.1.1-2.1.5.2.8
Tricaone mesylate	Sigma-Aldrich	886-86-2	Used to humanely sedated or sacrifice embryos 3.1.1
iScript cDNA Synthesis Kit	Bio-Rad	1708890	Synthesizes cDNA 3.1.2
Eppendorf 5424 microcentrifuge	Eppendorf	05-400-005	Microcentrifuge 4.1.1.3
GI254023X	Sigma-Aldrich	260264-93-5	ADAM10 inhibitor 4.1.2, 4.1.3
Isoprenaline hydrochloride	Sigma-Aldrich	I5627	Isoproterenol increases WSS 5.1.5
MATLAB	Mathworks	N/A	Cardiac mechanics analysis