

Major Resources Table

In order to allow validation and replication of experiments, all essential research materials listed in the Methods should be included in the Major Resources Table below. Authors are encouraged to use public repositories for protocols, data, code, and other materials and provide persistent identifiers and/or links to repositories when available. Authors may add or delete rows as needed.

Animals (in vivo studies)

Species	Vendor or Source	Background Strain	Persistent ID / URL
Zebrafish	Matsuoka et al., 2016	<i>Tg(hsp70l:slft4)^{bns82}</i>	ZFIN: <i>bns82Tg</i>
Zebrafish	Rossi et al., 2016	<i>Tg(hsp70l:vegfaa121-F17A)^{bns100}</i>	ZFIN: <i>bns100Tg</i>
Zebrafish	Bussmann et al., 2010	<i>Tg(-0.8flt1:RFP)^{hu5333}</i>	ZFIN: <i>hu5333Tg</i>
Zebrafish	Chi et al., 2008	<i>Tg(myf7:DsRed)^{s879}</i>	ZFIN: <i>s879Tg</i>
Zebrafish	Wang et al., 2015	<i>TgBAC(tcf21:NTR-mCherry)^{pd108}</i>	ZFIN: <i>pd108Tg</i>
Zebrafish	Kikuchi et al., 2011	<i>TgBAC(tcf21:CreERT2)^{pd42}</i>	ZFIN: <i>pd42Tg</i>
Zebrafish	Okuda et al., 2012	<i>Tg(-5.2lyve1b:DsRed)^{nz101}</i>	ZFIN: <i>nz101Tg</i>
Zebrafish	Nicenboim et al., 2015	<i>Tg(flt1:Mmu.Fos-GFP)^{wz2}</i>	ZFIN: <i>wz2Tg</i>
Zebrafish	Le Guen et al., 2014	<i>vegfc^{hu5055}</i>	ZFIN: <i>hu5055</i>
Zebrafish	Gancz et al., 2019	<i>vegfd^{bns257}</i>	ZFIN: <i>bns257</i>
Zebrafish	Kettleborough et al., 2013	<i>cxcr1^{sa14414}</i>	ZFIN: <i>sa14414</i>
Zebrafish	This paper	<i>Tg(hsp70l:emilin2a, cryaa:CFP)^{bns504}</i>	<i>bns504</i>
Zebrafish	This paper	<i>Tg(hsp70l:loxP-CFP-loxP-emilin2a-p2A-mCherry)^{bns510}</i>	<i>bns510</i>
Zebrafish	This paper	<i>emilin2a^{bns556}</i>	<i>bns556</i>
Zebrafish	This paper	<i>cxcl8a^{vu660}</i>	<i>vu660</i>

Genetically Modified Animals

	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male					
Parent - Female					

Antibodies

Target antigen	Vendor or Source	Catalog #	Working concentration	Lot # (preferred but not required)	Persistent ID / URL
MEF2 (discontinued)	Santa Cruz	sc-313	1:200 (IF)		https://www.scbt.com/p/mef-2-antibody-c-21
PCNA	Santa Cruz	sc-56	1:500 (IF)		https://www.scbt.com/p/pcna-antibody-pc10?requestFrom=search
embMHC (N2.261)	DSHB	N2.261	1:20 (IF)		https://dshb.biology.uiowa.edu/N2-261
GFP	Aves Labs	GFP-1010	1:500 (IF)		https://www.aveslabs.com/products/anti-green-fluorescent-protein-antibody-gfp

RFP	Rockland	600-401-379	1:200 (IF)		https://www.rockland.com/categories/primary-antibodies/rfp-antibody-pre-adsorbed-600-401-379/
Fli1a	abcam	ab133485	1:100 (IF)		https://www.abcam.com/fli1-antibody-epr4646-ab133485.html
Alexa Fluor 488 Goat Anti-chicken IgG (H+L)	Thermo Fisher Scientific	A-11039	1:500 (IF)		https://www.thermofisher.com/antibody/product/Goat-anti-Chicken-IgY-H-L-Secondary-Antibody-Polyclonal/A-11039
Alexa Fluor 488 Goat Anti-mouse IgG (H+L)	Thermo Fisher Scientific	A-11029	1:500 (IF)		https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG-H-L-Highly-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-11029
Alexa Fluor 568 Goat Anti-mouse IgG (H+L)	Thermo Fisher Scientific	A-11004	1:500 (IF)		https://www.thermofisher.com/antibody/product/Goat-anti-Mouse-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-11004
Alexa Fluor 647 Goat Anti-rabbit IgG (H+L)	Thermo Fisher Scientific	A-21244	1:500 (IF)		https://www.thermofisher.com/antibody/product/Goat-anti-Rabbit-IgG-H-L-Cross-Adsorbed-Secondary-Antibody-Polyclonal/A-21244
DIG-AP	Roche	11093274910	1:1000 (ISH)		https://www.sigmaaldrich.com/DE/de/product/roche/11093274910

IF: immunofluorescent staining; ISH: in situ hybridization

DNA/cDNA Clones

Clone Name	Sequence	Source / Repository	Persistent ID / URL
<i>pIsce_hsp70l_emilin2a_cryaa_CFP</i>	included in the Supplemental Materials	This paper	
<i>pTol2_hsp70l_loxP_CFP-STOP_loxP_emilin2a_p2A_mCherry</i>	included in the Supplemental Materials	This paper	
<i>pCS2+_vegfc</i>	included in the Supplemental Materials	This paper	
pT3TS-nCas9n		Addgene Cat# 46757	https://www.addgene.org/46757/
pCMV-Tol2		Addgene Cat# 31823	https://www.addgene.org/31823/

Cultured Cells

Name	Vendor or Source	Sex (F, M, or unknown)	Persistent ID / URL
Human Umbilical Vein Endothelial Cells (HUVECs)	Lonza Catalog #: C2519A	N/A	https://bioscience.lonza.com/lonza_bs/DE/en/Primary-and-Stem-Cells/p/000000000000184665/HUVEC-%E2%80%93-Human-Umbilical-Vein-Endothelial-Cells%2C-Pooled%2C-in-EGM-2

Data & Code Availability

Description	Source / Repository	Persistent ID / URL
RNAseq WT vs <i>Tg(hsp70l:sflt4)</i>	Gene Expression Omnibus	GSE168175

Other

Description	Source / Repository	Persistent ID / URL
Qtracker™705 Vascular labels	Thermo Fisher Scientific	https://www.thermofisher.com/order/catalog/product/Q21061MP
Acid Fuchsin Orange G (AFOG) kit	BioGnost	https://www.biognost.com/product/a-f-o-g-kit/
BMPurple	Roche	https://www.sigmaaldrich.com/DE/de/product/roche/11442074001
Pierce Primary Cardiomyocyte Isolation Kit	Thermo Fisher Scientific	https://www.thermofisher.com/order/catalog/product/88281
DAPI	Sigma	https://www.sigmaaldrich.com/DE/de/product/sigma/d9542
RNA clean and concentrator extraction kit	Zymo	https://www.zymoresearch.de/collections/rna-clean-concentrator-kits-rcc
Maxima first strand cDNA synthesis kit	Thermo Fisher Scientific	https://www.thermofisher.com/order/catalog/product/K1641
DyNAmo Flash SYBR Green qPCR Kit	Thermos Fisher Scientific	https://www.thermofisher.com/order/catalog/product/F415S
PrimeStar Max DNA Polymerase	Takara	https://www.takarabio.com/products/pcr/high-fidelity-pcr/primestar-max-dna-polymerase
siVEGFC	Mission esiRNA, Sigma	https://www.sigmaaldrich.com/DE/de/product/sigma/ehu013781
Lipofectamine RNAiMAX	Invitrogen	https://www.thermofisher.com/de/de/home/brands/product-brand/lipofectamine/lipofectamine-rnaimx.html?gclid=Cj0KCQiAosmPBhCPARIsAHOen-MJQWnnwz86bQV8Ulf2kL-37twuYrcdpZ7ksT_MxDf6mpGiiNL7G7QaAhmiEALw_wcB&ef_id=Cj0KCQiAosmPBhCPARIsAHOen-MJQWnnwz86bQV8Ulf2kL-37twuYrcdpZ7ksT_MxDf6mpGiiNL7G7QaAhmiEALw_wcB:G:s&s_kwcid=AL!3652!3!552917619244!p!!g!!lipofectamine%20rnaimax&cid=bid

DOI [to be added]

		clb_tfx_r01_co_cp0000_pjt0000_bid00000_0se_gaw_bt_pur_con
SB225002	Sigma	https://www.sigmaaldrich.com/DE/de/product/sigma/sml0716
DMSO	Sigma	https://www.sigmaaldrich.com/DE/de/product/sigma/d4540?qclid=Cj0KCQiAubmPBhCyARIsAJWNpiPOf6zyCII55M_PXjIGqjzz_GuRThqYeQAFjrLLCnQr1I5VliOoAy8aAlz5EALw_wcB
4-hydroxytamoxifen	Sigma	https://www.sigmaaldrich.com/DE/de/product/sigma/h7904
ISce	NEB	https://international.neb.com/products/r0694-iscei#Product%20Information
MsI1	NEB	https://international.neb.com/products/r0571-msli#Product%20Information
Not1-HF	NEB	https://international.neb.com/products/r3189-noti-hf#Product%20Information
T4 DNA polymerase	NEB	https://international.neb.com/products/m0203-t4-dna-polymerase#Product%20Information
MEGA short Script T7 kit	Invitrogen	https://www.thermofisher.com/order/catalog/product/AM1354?qclid=Cj0KCQiAxc6PBhCEARIsAH8Hff3C0qTWEOnJt-6yKnr86hgdaiQIYFC2Rd0zUwzE93Lbz1NfGSjAPXYaAvNjEALw_wcB&ef_id=Cj0KCQiAxc6PBhCEARIsAH8Hff3C0qTWEOnJt-6yKnr86hgdaiQIYFC2Rd0zUwzE93Lbz1NfGSjAPXYaAvNjEALw_wcB:G:s&s_kwid=AL13652!3!557381067596!!!g!!&cid=bid_clb_gme_r01_co_cp0000_pjt0000_bid00000_0se_gaw_dy_pur_con
mMessage mMachine SP6 kit	Invitrogen	https://www.thermofisher.com/order/catalog/product/AM1340?SID=srch-srp-AM1340