

## Supplemental Online

Supplemental online Table 1. Primers used for RT-PCR, related to Figure 1F

Gene	Forward primer (5'-3')	Reverse primer (5'-3')	Size
<i>β-Actin</i>	GCCGAGGACTTTGATTGC	GTGTGGACTTGGGAGAGG	143
<i>NANOG</i>	TAGCAATGGTGTGACGCAGA	CCTCGCTGATTAGGCTCCAA	615
<i>SeV</i>	GGATCACTAGGTGATATCGAGC	ACCAGACAAGAGTTTAAGAGATATGTATC	181

Supplemental online Table 2. Primers used for qPCR, related to Figure 2E

Gene	Forward primer (5'-3')	Reverse primer (5'-3')	Size
<i>GAPDH</i>	AATCCCATCACCATCTTCCAG	AAATGAGCCCCAGCCTTC	122
<i>MYH6</i>	CGGCCAGATTCTTCAGGATT	CTGACTTGCGGAGGTAAGTGG	112
<i>MYH7</i>	ACCAACCTGTCCAAGTTCCG	TTCAAGCCCTTCGTGCCAAT	128
<i>TNNT2</i>	TACATCCAGAAGACAGAGCG	CTCTCAGTTGGTCTTCATTGAG	124
<i>MLC2a</i>	GGAGTTCAAAGAAGCCTTCAGC	TCCTCTGGGACACTCACCTT	111
<i>MLC2v</i>	TGGGCGAGTGAACGTGAAAA	AGGGTCCGCTCCCTTAAGTT	118
<i>TTN</i>	CAACCTGAGTCTGGAAGCTCCT	CGTCACGTGTATCCCTTTCTGA	125
<i>NANOG</i>	ACCTCAGCTACAAACAGGTGA	CTTCTGCGTCACACCATTGC	107
<i>OCT4</i>	AGTTTGTGCCAGGGTTTTTTG	ACTTCACCTCCCTCCAACC	113
<i>SOX2</i>	GGGAAAGTAGTTTGCTGCCTC	CGCCGCCGATGATTGTTATT	130
<i>TERT</i>	GGCACGGCTTTTGTTCAGAT	TCCGGGCATAGCTGGAGTAG	109
<i>HCN4</i>	GGAGTACCCCATGATGCGAA	CTTCTTGCCAATGCGGTCCA	70
<i>KCNJ2</i>	TCCGAGGTCAACAGCTTCAC	TTGGGCATTCATCCGTGACA	97

Supplemental online Table 3. Sequential listing of primers for heatmap (Group 1), related to Figure 4C

GeneBank	Gene Symbol	Gene Name
NM_000345	<i>SNCA</i>	Synuclein
NM_001888	<i>CRYM</i>	Crystallin, mu
NM_002521	<i>NPPB</i>	Natriuretic peptide B
NM_002026	<i>FN1</i>	Fibronectin 1
NM_017415	<i>KLHL3</i>	Kelch-like 3 (Drosophila)
NM_001463	<i>FRZB</i>	Frizzled-related protein
NM_000901	<i>NR3C2</i>	Nuclear receptor subfamily 3, group C
NM_000921	<i>PDE3A</i>	Phosphodiesterase 3A, cGMP-inhibited
NM_001083	<i>PDE5A</i>	Phosphodiesterase 5A, cGMP-specific
NM_053056	<i>CCND1</i>	Cyclin D1
NM_000025	<i>ADRB3</i>	Adrenergic, beta-3-, receptor
NM_002427	<i>MMP13</i>	Matrix metalloproteinase 13 (collagenase 3)
NM_182898	<i>CREB5</i>	CAMP responsive element binding protein 5
NM_002825	<i>PTN</i>	Pleiotrophin
NM_001946	<i>DUSP6</i>	Dual specificity phosphatase 6
NM_002982	<i>CCL2</i>	Chemokine (C-C motif) ligand 2
NM_138962	<i>MSI2</i>	Musashi homolog 2 (Drosophila)
NM_000044	<i>AR</i>	Androgen receptor
NM_002471	<i>MYH6</i>	Myosin, heavy chain 6, cardiac muscle,
NM_006393	<i>NEBL</i>	Nebulette
NM_000121	<i>EPOR</i>	Erythropoietin receptor
NM_004046	<i>ATP5A1</i>	ATP synthase, alpha subunit, cardiac
NM_002492	<i>NDUFB5</i>	NADH dehydrogenase (ubiquinone)
NM_005595	<i>NFIA</i>	Nuclear factor I/A
NM_006172	<i>NPPA</i>	Natriuretic peptide A
NM_000906	<i>NPR1</i>	Natriuretic peptide receptor A

NM_005964	<i>MYH10</i>	Myosin, heavy chain 10, non-muscle
NM_001085	<i>SERPINA3</i>	Serpin peptidase inhibitor, member 3
NM_000789	<i>ACE</i>	Angiotensin I converting enzyme
NM_002750	<i>MAPK8</i>	Mitogen-activated protein kinase 8
NM_000165	<i>GJA1</i>	Gap junction protein, alpha 1, 43kDa
NM_000537	<i>REN</i>	Renin
NM_002888	<i>RASSF1</i>	Ras association (RalGDS/AF-6) domain
NM_001901	<i>CTGF</i>	Connective tissue growth factor
NM_001681	<i>ATP2A2</i>	ATPase, Ca transporting, cardiac muscle
NM_001129	<i>AEBP1</i>	AE binding protein 1
NM_001885	<i>CRYAB</i>	Crystallin, alpha B
NM_000240	<i>MAOA</i>	Monoamine oxidase A
NM_001008493	<i>ENAH</i>	Enabled homolog (Drosophila)
NM_000338	<i>SLC12A1</i>	Solute carrier family 12
NM_005517	<i>HMGN2</i>	High mobility group nucleosomal binding
NM_183011	<i>CREM</i>	CAMP responsive element modulator
NM_003995	<i>NPR2</i>	Natriuretic peptide receptor B
NM_000191	<i>HMGCL</i>	3-hydroxymethyl-3-methylglutaryl-CoA lyase
NM_000901	<i>NR3C1</i>	Nuclear receptor subfamily 3, group C
NM_001992	<i>F2R</i>	Coagulation factor II (thrombin) receptor
NM_000024	<i>ADRB2</i>	Adrenergic, beta-2-, receptor, surface
NM_002888	<i>RARRES1</i>	Retinoic acid receptor responder
NM_000679	<i>ADRB1</i>	Adrenergic, alpha-1B-, receptor
NM_000065	<i>C6</i>	Complement component 6
NM_004064	<i>CDKN1B</i>	Cyclin-dependent kinase inhibitor 1B
NM_007008	<i>RTN4</i>	Reticulon 4
NM_000090	<i>COL3A1</i>	Collagen, type III, alpha 1
NM_000908	<i>NPR3</i>	Natriuretic peptide receptor C
NM_002988	<i>CCL18</i>	Chemokine (C-C motif) ligand 18

NM_000922	<i>PDE3B</i>	Phosphodiesterase 3B, cGMP-inhibited
NM_000088	<i>COL1A1</i>	Collagen, type I, alpha 1
NM_031850	<i>AGTR1</i>	Angiotensin II receptor, type 1
NM_003014	<i>SFRP4</i>	Secreted frizzled-related protein 4
NM_002986	<i>CCL11</i>	Chemokine (C-C motif) ligand 11
NM_001920	<i>DCN</i>	Decorin

Supplemental online Table 4. Sequential listing of primers for heatmap (Group 2), related to Figure 4C

GeneBank	Gene Symbol	Gene Name
NM_005159	<i>ACTC1</i>	Actin, alpha, cardiac muscle 1
NM_001153	<i>ANXA4</i>	Annexin A4
NM_000679	<i>ADRA1B</i>	Adrenergic, alpha-1B-, receptor
NM_005952	<i>MT1X</i>	Metallothionein 1X
NM_002603	<i>PDE7A</i>	Phosphodiesterase 7A
NM_015714	<i>G0S2</i>	G0/G1switch 2
NM_000901	<i>NR3C2</i>	Nuclear receptor subfamily 3, group C
NM_004387	<i>NKX2-5</i>	NK2 homeobox 5
NM_033303	<i>ADRA1A</i>	Adrenergic, alpha-1A-, receptor
NM_000109	<i>DMD</i>	Dystrophin
NM_080629	<i>COL11A1</i>	Collagen, type XI, alpha 1
NM_000859	<i>HMGCR</i>	3-hydroxy-3-methylglutaryl-CoA reductase
NM_000678	<i>ADRA1D</i>	Adrenergic, alpha-1D-, receptor
NM_002745	<i>MAPK1</i>	Mitogen-activated protein kinase 1
NM_004598	<i>SPOCK1</i>	Sparc/osteonectin
NM_006271	<i>S100A1</i>	S100 calcium binding protein A1
NM_006475	<i>POSTN</i>	Periostin, osteoblast specific factor

Supplemental online Movie. Spontaneously beating, transgene-free AF-CMs (day 41, magnification, 4x), related to Figure 5A