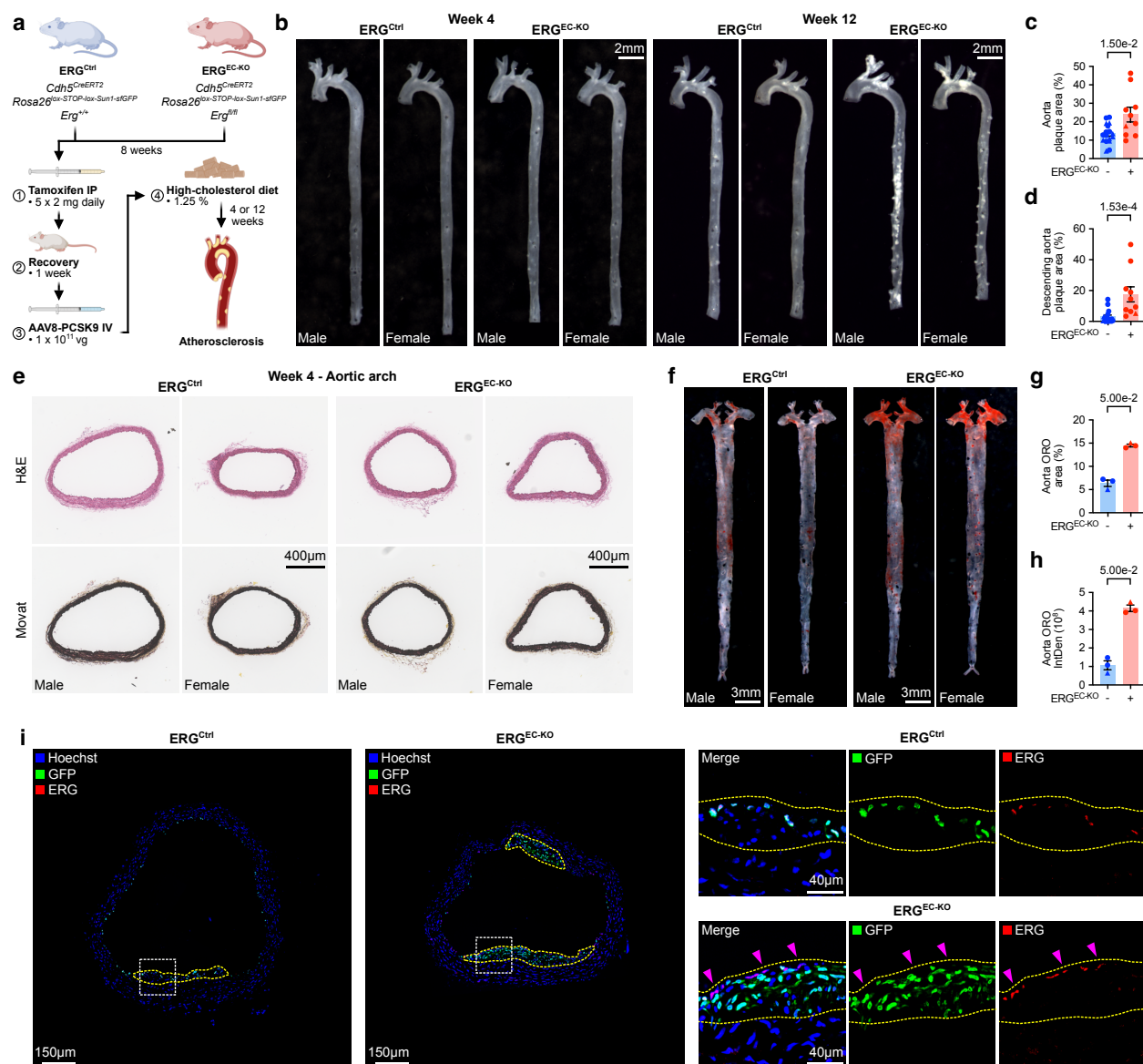


Supplementary Material:

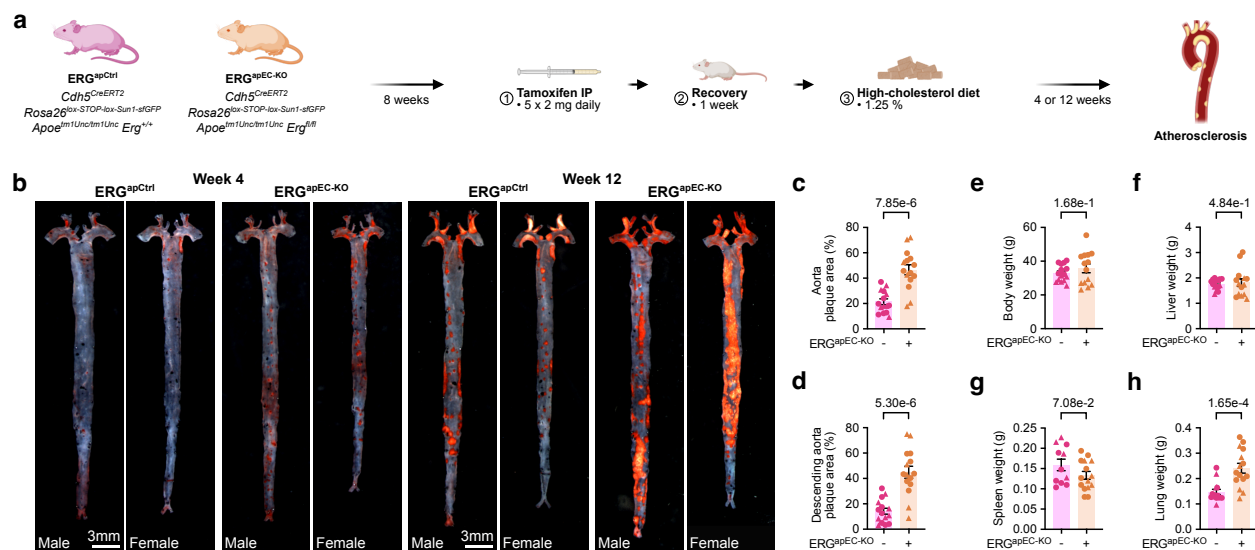
ERG preserves endothelial identity to limit atherosclerosis

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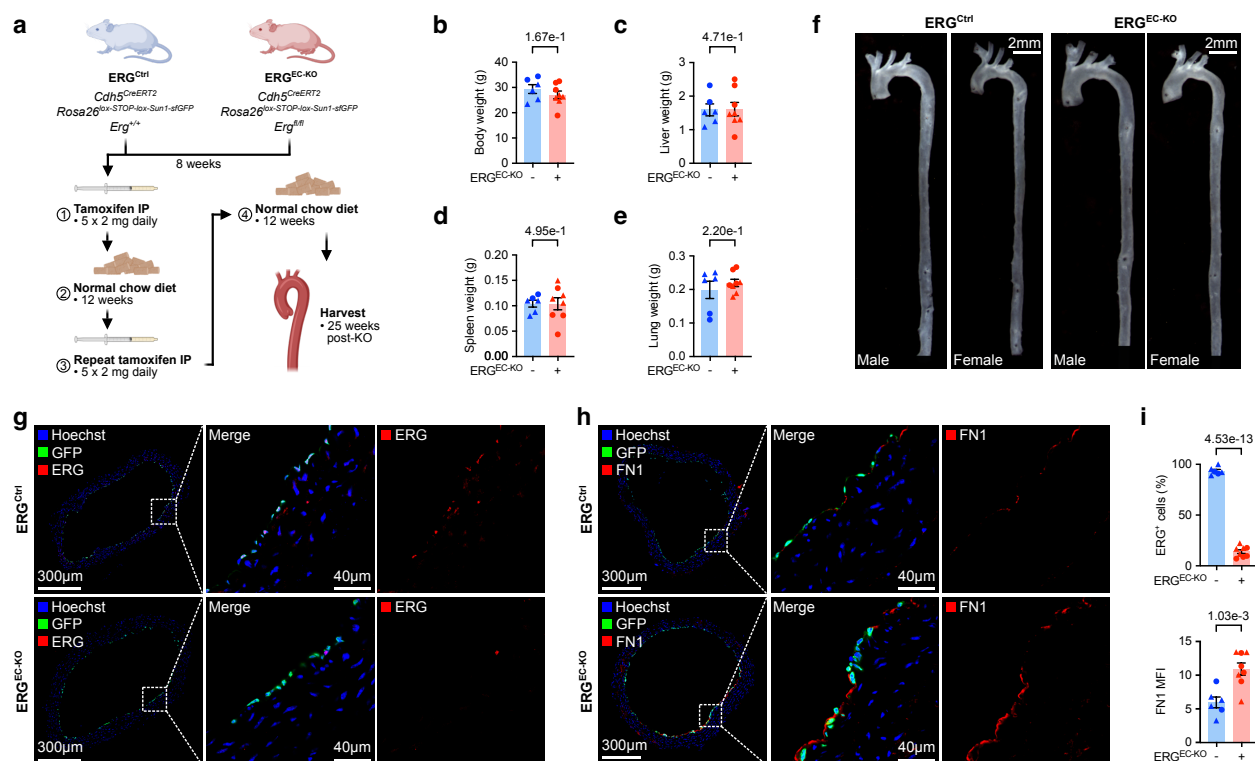


Supplementary Fig. 2: Validation of increased endothelial dysfunction and atherogenesis in unfloxed versus floxed *Erg* mice. **a**, Schematic of *Erg* knockout and atherosclerosis induction with PCSK9 overexpression in unfloxed *Erg* (*ERG*^{Ctrl}) and floxed *Erg* mice (*ERG*^{EC-KO}). IP, Intraperitoneal; IV, intravenous. Cartoon schematics were created in BioRender. Botts, S. (2026) <https://BioRender.com/b11ghtl>. **b**, Representative brightfield imaging of aortas from atherosclerotic mice following 4 or 12 weeks of high-cholesterol diet (HCD) and quantification of plaque at 12 weeks of HCD in the total aorta (**c**; one-sided Welch's t-test) and descending aorta (**d**; *ERG*^{Ctrl}, *n* = 17; *ERG*^{EC-KO}, *n* = 10; one-sided unpaired t-test). **e**, H&E and Movat stained aortic arch cross sections from atherosclerotic mice at 4 weeks of HCD. **f**, Representative *en face* oil red O (ORO)-stained aortas from atherosclerotic mice after 4 weeks of HCD and quantification of lipid by area (**g**) and integrated density (IntDen) (**h**; *ERG*^{Ctrl}, *n* = 3; *ERG*^{EC-KO}, *n* = 3; one-sided Mann-Whitney tests). **i**, Representative immunofluorescence staining of aortic arch cross sections from atherosclerotic mice at 12 weeks of HCD. Dashed yellow lines denote plaque. Magenta arrows denote replenishment of the endothelium with GFP-ERG⁺ ECs in *ERG*^{EC-KO} mice. Bar

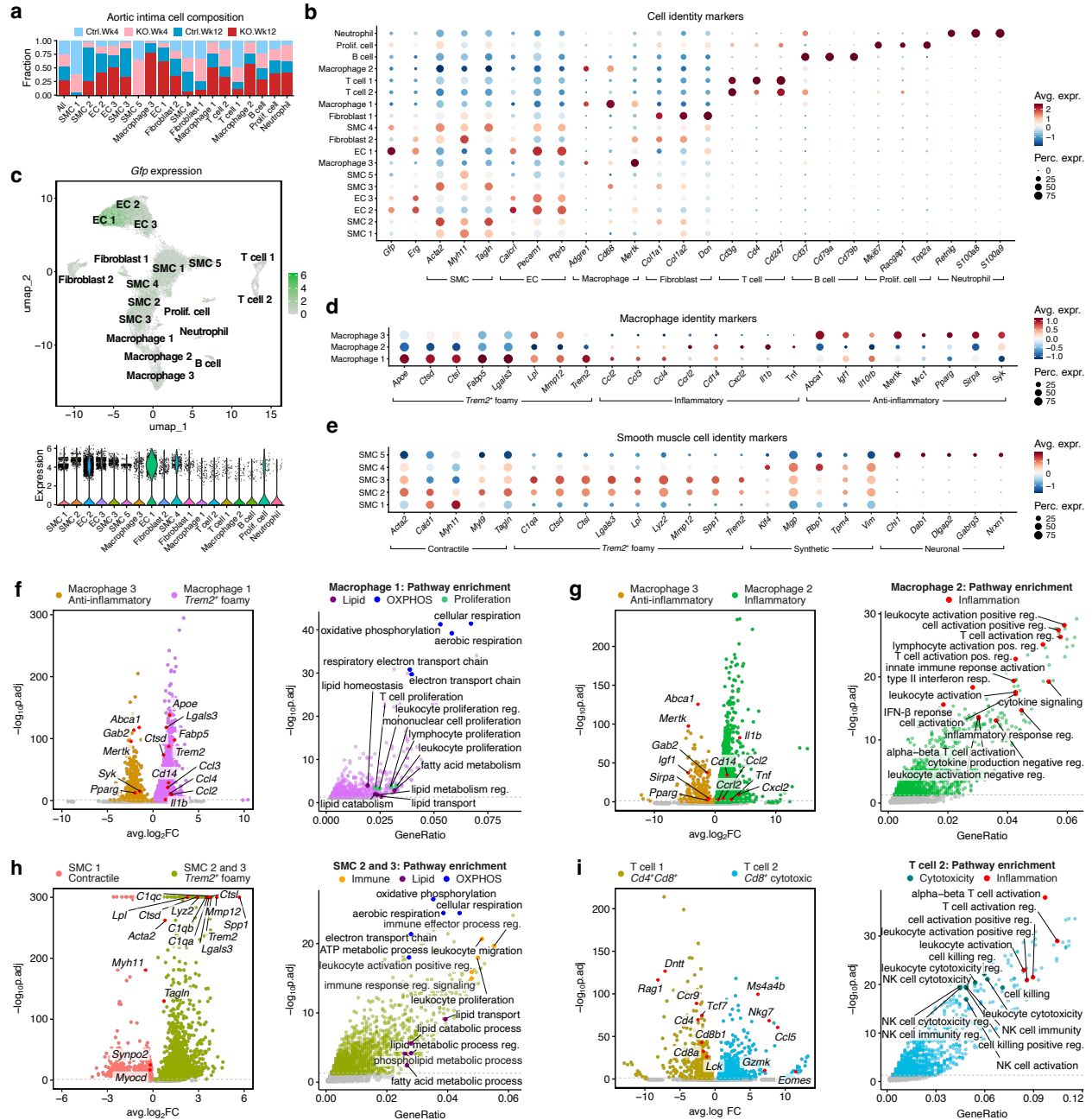
graphs are presented as mean $\pm$ standard error of the mean (SEM). Male data points are depicted with circles and female data points are depicted with triangles. Source data are provided as a Source Data file.



Supplementary Fig. 3: Loss of ERG increases atherosclerotic plaque burden in ApoE-deficient mice. **a**, Schematic of *Erg* knockout and atherosclerosis induction in ApoE-deficient mice with unfloxed *Erg* (*ERG*^{apCtrl}) and floxed *Erg* loci (*ERG*^{apEC-KO}). IP, Intraperitoneal. Cartoon schematics were created in BioRender. Botts, S. (2026) <https://BioRender.com/b11ghtl>. **b**, Representative *en face* oil red O (ORO)-stained aortas from atherosclerotic mice after 4 or 12 weeks of high-cholesterol diet (HCD) and quantification of plaque in the total aorta (c) and descending aorta (d; *ERG*^{apCtrl}, *n* = 15; *ERG*^{apEC-KO}, *n* = 15; one-sided Welch's t-tests). Body (e) and liver weight (f; *ERG*^{apCtrl}, *n* = 15; *ERG*^{apEC-KO}, *n* = 14; one-sided Welch's t-tests), spleen weight (g; *ERG*^{apCtrl}, *n* = 11; *ERG*^{apEC-KO}, *n* = 15; one-sided unpaired t-test), and average lung weight (h; *ERG*^{apCtrl}, *n* = 15; *ERG*^{apEC-KO}, *n* = 15; one-sided Welch's t-test) of *ERG*^{apCtrl} and *ERG*^{apEC-KO} mice following 12 weeks of HCD. Bar graphs are presented as mean ± standard error of the mean (SEM). Male data points are depicted with circles and female data points are depicted with triangles. Source data are provided as a Source Data file.

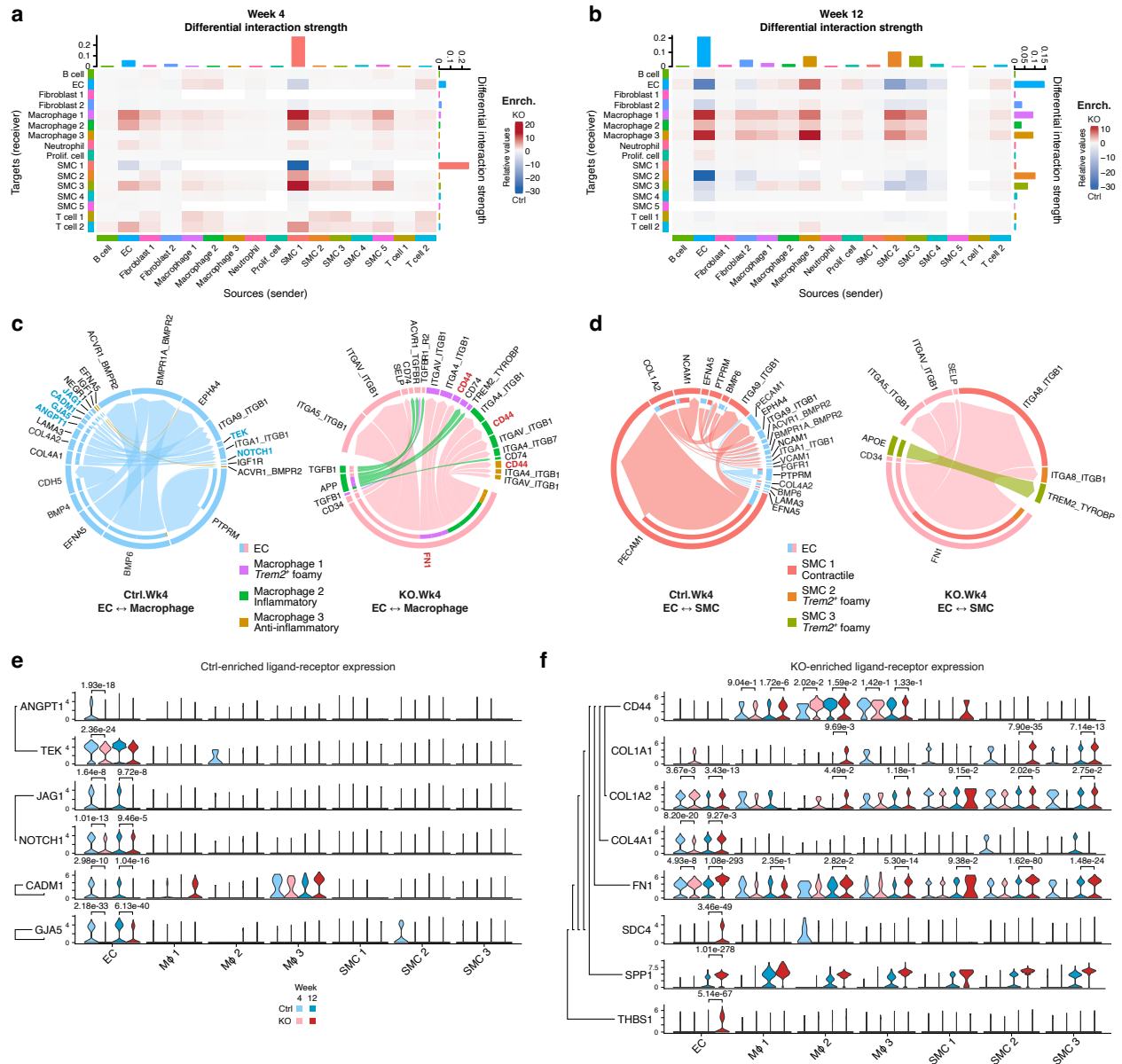


Supplementary Fig. 4: Endothelial *Erg* knockout does not induce atherosclerotic plaque formation in normocholesterolemic mice. **a**, Schematic of *Erg* knockout in unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}). IP, intraperitoneal; KO, knockout. Cartoons were created in BioRender. Botts, S. (2026) <https://BioRender.com/b1lghtl>. **b-e**, Body and tissue weight of mice following 25 weeks of normal chow diet (NCD) (ERG^{Ctrl} , $n = 6$; ERG^{EC-KO} , $n = 8$; one-sided unpaired t-tests). **f**, Representative brightfield imaging of aortas from normocholesterolemic mice after 25 weeks of NCD. Immunofluorescence staining of ERG (**g**) and the mesenchymal marker FN1 (**h**) in aortic arch cross sections following 25 weeks of NCD. **i**, Quantification of ERG^{+} endothelial cells and FN1 mean fluorescence intensity (MFI) in aortic arch cross sections (ERG^{Ctrl} , $n = 6$; ERG^{EC-KO} , $n = 8$; one-sided unpaired t-tests). Bar graphs are presented as mean $\pm$ standard error of the mean (SEM). Male data points are depicted with circles and female data points are depicted with triangles. Source data are provided as a Source Data file.

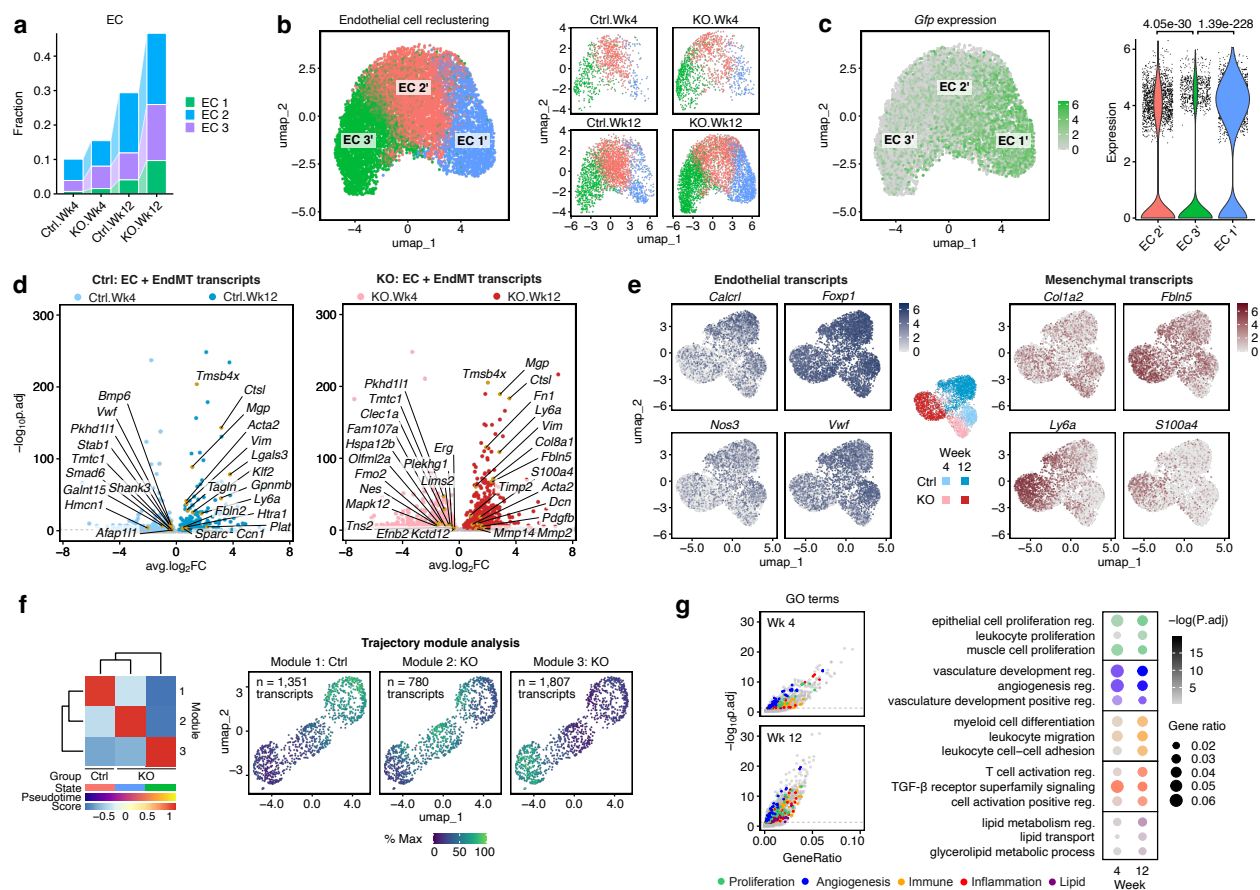


Supplementary Fig. 5: *Erg* knockout induces pro-atherosclerotic phenotypes among multiple aortic intimal cell populations. **a**, Composition plot for aortic intimal cell clusters obtained from single-cell RNA sequencing of unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 4 or 12 weeks of high-cholesterol diet (HCD) (ERG^{Ctrl} , $n = 6$ pooled mice; ERG^{EC-KO} , $n = 6$ pooled mice). EC, endothelial cell; Prolif. cell, proliferating cell; SMC, smooth muscle cell. **b**, Cell identity markers associated with all aortic intimal clusters ($p_{adj} < 0.05$; two-sided Wilcoxon rank-sum tests; Bonferroni correction). Avg. expr., average expression; Perc. expr., percent expression. **c**, Uniform manifold approximation and projection (UMAP) and violin plots depicting expression of Sun1-sfGFP in aortic intimal cells. Cell identity markers associated with aortic intimal macrophage (**d**) and SMC clusters (**e**) ($p_{adj} <$

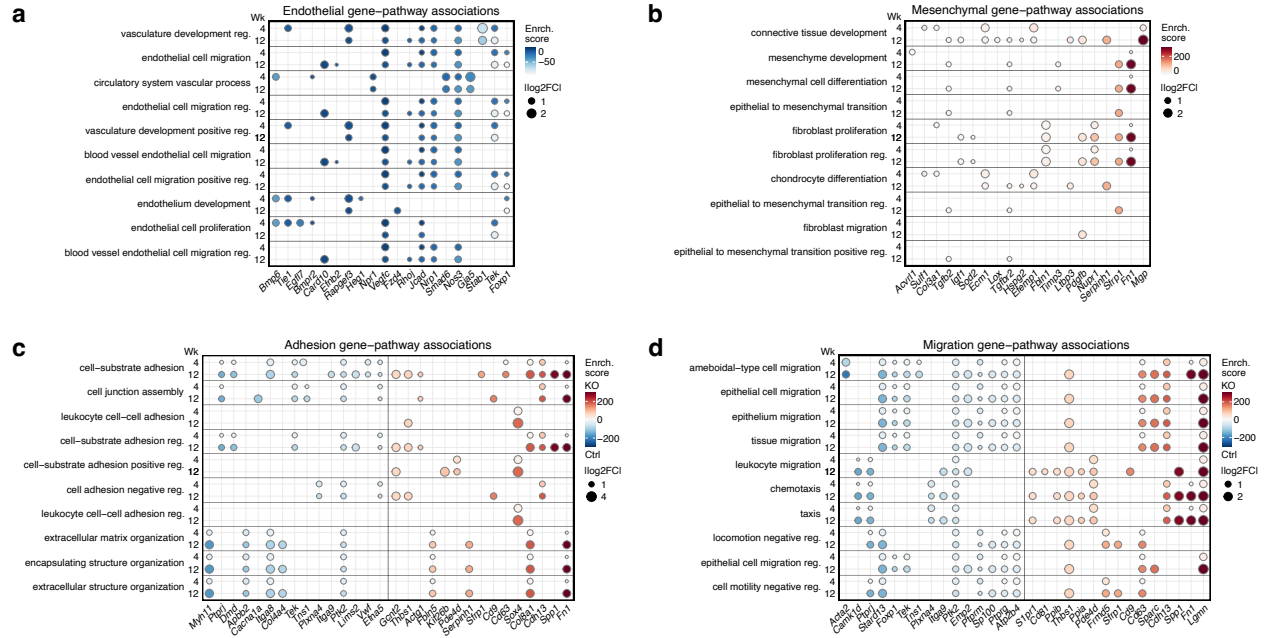
0.05; two-sided Wilcoxon rank-sum tests; Bonferroni correction). Differential expression analysis and pathway enrichment of transcripts from Macrophage 1 (*Trem2*⁺ foamy) versus Macrophage 3 (anti-inflammatory) (**f**), Macrophage 2 (inflammatory) versus Macrophage 3 (anti-inflammatory) (**g**), SMC 2 and 3 (*Trem2*⁺ foamy) versus SMC 1 (contractile) (**h**), and T cell 2 (*Cd8*⁺ cytotoxic) versus T cell 1 (*Cd4*⁺ *Cd8*⁺) (**i**) with top pathways by gene ratio highlighted (p.adj < 0.05; one-sided Fisher's exact tests; Benjamini-Hochberg correction). OXPHOS, oxidative phosphorylation.



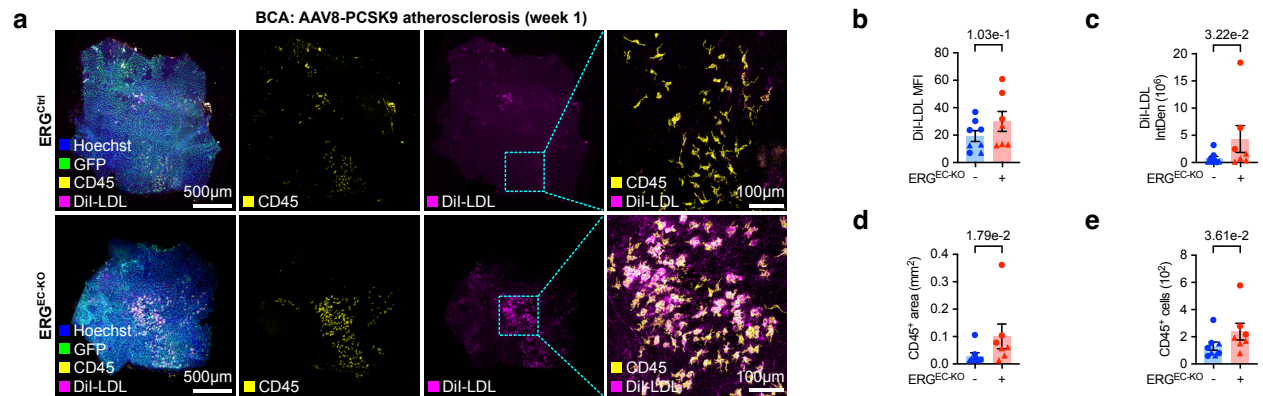
Supplementary Fig. 6: Predicting cell-cell communication in the atherosclerotic intima of *Erg* knockout mice. Differential interaction strength plots depicting communication between aortic intimal cells isolated from unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 4 weeks (a) or 12 weeks (b) of high-cholesterol diet (HCD) (ERG^{Ctrl} , $n = 6$ pooled mice; ERG^{EC-KO} , $n = 6$ pooled mice used for single-cell RNA sequencing). Enrichment in ERG^{Ctrl} and ERG^{EC-KO} mice are depicted in blue and red respectively ($p_{adj} < 0.05$). EC, endothelial cell; Prolif. cell, proliferating cell; SMC, smooth muscle cell; Enrich., enrichment. Differential ligand-receptor (LR) interaction plots for ECs and macrophages (c) and ECs and SMCs (d) after 4 weeks of HCD ($p_{adj} < 0.05$; two-sided Wilcoxon rank-sum tests; Bonferroni correction). Select LR interactions enriched in ERG^{Ctrl} and ERG^{EC-KO} mice are shown in blue and red text respectively. Transcript expression plots for LR pairs enriched in ERG^{Ctrl} mice (e) and ERG^{EC-KO} mice (f) with select p-values indicated. Mφ, macrophage.



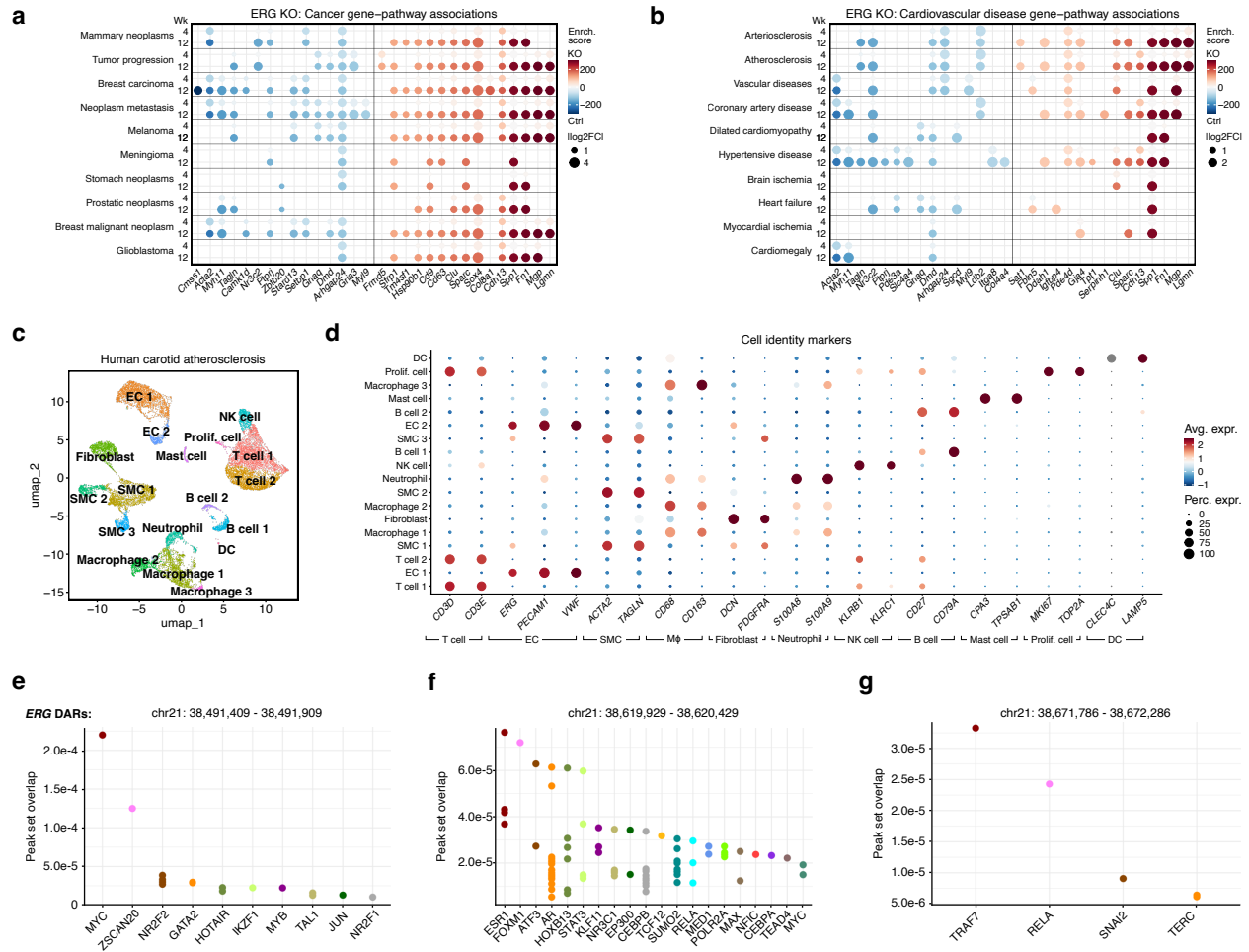
Supplementary Fig. 7: Loss of ERG promotes transcriptional programs for arterial endothelial cell dedifferentiation and mesenchymal transition in atherosclerosis. **a**, Enumeration of endothelial cell (EC) clusters in aortic intimal single-cell RNA sequencing of unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 4 or 12 weeks of high-cholesterol diet (HCD) (ERG^{Ctrl} , $n = 6$ pooled mice; ERG^{EC-KO} , $n = 6$ pooled mice). **b**, Uniform manifold approximation and projection (UMAP) plots depicting ECs after subsetting and reclustering. **c**, UMAP and violin plots depicting expression of Sun1-sfGFP in ECs. **d**, Differential expression (DE) analysis of EC and endothelial-to-mesenchymal transition (EndMT) transcripts from ERG^{Ctrl} and ERG^{EC-KO} ECs during lesion development from 4 to 12 weeks of HCD ($p_{adj} < 0.05$; two-sided Wilcoxon rank-sum tests; Bonferroni correction). **e**, UMAP plots for endothelial and mesenchymal transcripts of interest. **f**, Pseudotime analysis of gene expression in aortic intimal ECs with clustering of pseudotime trajectory modules (heatmap) and UMAP plots depicting aggregate gene expression for each module ($p_{adj} < 0.05$; Moran's I statistic; Benjamini-Hochberg correction). **g**, Global pathway enrichment following *Erg* knockout with top pathways by gene ratio highlighted for categories of interest ($p_{adj} < 0.05$; one-sided Fisher's exact tests; Benjamini-Hochberg correction).



Supplementary Fig. 8: Gene-pathway associations underlying endothelial-to-mesenchymal transition and altered cell adhesion and migration in endothelial cells from atherosclerotic *Erg* knockout mice. Associations depicted for single-cell RNA sequencing of aortic intimal endothelial cells from unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 4 or 12 weeks of high-cholesterol diet (ERG^{Ctrl} , $n = 6$ pooled mice; ERG^{EC-KO} , $n = 6$ pooled mice; transcripts, $p.adj < 0.05$, two-sided Wilcoxon rank-sum tests with Bonferroni correction; pathways, $p.adj < 0.05$, one-sided Fisher's exact tests with Benjamini-Hochberg correction). **a**, Top endothelial pathways by gene ratio and endothelial transcripts by enrichment score (Enrich. score) in ERG^{Ctrl} mice. **b**, Top mesenchymal pathways by gene ratio and mesenchymal transcripts by enrichment score in ERG^{EC-KO} mice. Top cell adhesion (**c**) and migration pathways (**d**) by gene ratio and associations with top ERG^{Ctrl} -enriched and ERG^{EC-KO} -enriched transcripts.



Supplementary Fig. 9: *Erg* knockout increases arterial endothelial permeability, lipid uptake, and intimal myeloid cell accumulation during atherogenesis. **a**, Representative immunofluorescence staining of DiI-labelled low-density lipoprotein (LDL) and CD45⁺ myeloid cells in brachiocephalic artery (BCA) cross sections from unflox *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 1 week of high-cholesterol diet. Quantification of myeloid cell DiI-LDL uptake by mean fluorescence intensity (MFI) (**b**) and integrated density (IntDen) (**c**; ERG^{Ctrl}, $n = 8$; ERG^{EC-KO}, $n = 7$; one-sided unpaired t-tests). Enumeration of CD45⁺ intimal myeloid cells by area (**d**) and by cell number (**e**; ERG^{Ctrl}, $n = 8$; ERG^{EC-KO}, $n = 7$; one-sided unpaired t-tests). Bar graphs are presented as mean $\pm$ standard error of the mean (SEM). Male data points are depicted with circles and female data points are depicted with triangles. Source data are provided as a Source Data file.



Supplementary Fig. 10: ERG loss is associated with endothelial dysfunction in human atherosclerosis. Top associations by gene overlap for cancer (**a**) and cardiovascular disease pathways (**b**) obtained from single-cell RNA sequencing of aortic endothelial cells in unfloxed *Erg* (ERG^{Ctrl}) and floxed *Erg* mice (ERG^{EC-KO}) with AAV8-PCSK9-induced atherosclerosis and 4 or 12 weeks of high-cholesterol diet (ERG^{Ctrl}, $n = 6$ pooled mice; ERG^{EC-KO}, $n = 6$ pooled mice; transcripts, $p_{\text{adj}} < 0.05$, two-sided Wilcoxon rank-sum tests with Bonferroni correction; pathways, $p_{\text{adj}} < 0.05$, one-sided Fisher's exact tests with Benjamini-Hochberg correction). Enrich. score; enrichment score. (**c**) Uniform manifold approximation and projection (UMAP) plot of cells isolated from human carotid atherosclerotic core and proximal adjacent regions. DC, dendritic cell; EC, endothelial cell; NK cell, natural killer cell; Prolif. cell, proliferating cell; SMC, smooth muscle cell. (**d**) Cell identity markers characterizing cell clusters ($p_{\text{adj}} < 0.05$; two-sided Wilcoxon rank-sum tests; Bonferroni correction). M ϕ , macrophage; Avg. expr., average expression; Perc. expr., percent expression. (**e-g**) Cistrome plots depicting motifs associated with the top three differentially accessible regions (DARs) by p-value obtained from bulk chromatin accessibility of *ERG* in human coronary lesions versus non-lesions ($p_{\text{adj}} < 0.05$; two-sided Fisher's exact tests with Benjamini-Hochberg correction).

Supplementary Table 1. Sun1-sfGFP reporter sequence

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source	unknown
feature	exon
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end (bp)	4560
score	.
strand	+
frame	.
attribute	gene_id "GFP"; transcript_id "GFP"; gene_name "GFP"; gene_biotype "protein_coding";
FASTA (n=5215 bp)	>GFP ATGGACTTTTCTCGGCTGCACACGTACACCCACCCAGTGTGTGCCGGAGAACACTGGCTACACTTA CGCACTCAGTTCTAGTTACTCGTCGGATGCTCTGGATTTTGAACTGAGCACAAAGTTGGAACCTGTATTTG ACTCTCCAAGGATGTCCCGCCGAGCTTGCCTGCTGGTCACAACAGCTTCGTACAGCAGTGGGGACAG CCAGGCTATTGATTGCACATTAGCACAGCAGGGCCACCCCGCCAAGGGGAGAGAAACCAGGACA GTCAAACAGAGAAGAAGTGCAAGCAAGCCAGCTTTTAGTATCAACCACCTGTCAGGGAAGGGCTTGCC TCGAGCACAAGCCATGACAGCTCTTGACGCCTGCGGAGTGCCACGGTGCTGCGGCACCCTGTGCTAG ATGAGTCCCTGATTCTGTGAGCAGACCAAAGTGGACCACTTCTGGGGTCTCGATGATGATGGTGACCTTA AAGGTGGAATAAAGCTGCCACTCAGGGAATGGTGAAGTGGCAGCAGAGGTGGCGAGCAGCAATGG ATACACTTGCCGTGACTGCAGGATGCTCTCAGCGCGCACTGACGCACTCACAGCCCACTCTGCCATCC ACGGGACCACCTCCAGGGTGTACTCCAGAGACAGGACTCTCAAACCACGCGGAGTGTCCTTTTACCTG GATAGGACTCTGTGGCTGGCCAAGTCCACCTCCTCATCCTTGCATCATTATAGTTCAACTTTTCCAAGT GGTTTTAATGAAGCTCAATTTGAACTTACAAATTGAAAGGCTATGAATCCAGAGCTTATGAATCACAGAG CTATGAGACAAAGAGCCATGAGTCAGAAGCCCATCTCGGTCACTGTGGGAGGATGACTGCCGGAGAAC TTCCAGAGTGGACGGGGAGTCCCTGTGCGATGACTGTAAGGGGAAGAAGCACCTTGAGATACACACA GCCACCACTCGCAACTGCCCCAGCCACACAGGGTGGCCGGGGCCATGGGGCGCCTCTGCATCTAT ACAGGTGACCTCTTGTTCAAGCACTGCGAAGGACTAGAGTGCCGGGTGGTCTGTGGCCGAGGCCG TGTGGTCGGTGCTCTGGCTGGCTGCTCTGCTCCAGGGAAGGCAGCCTCGGGAACCTTCTGGTGGCTA GGGAGCGGCTGGTACCAATTTGTTACTTTGATTCTTGCTGAATGTCTTTCTTCTTACCAGGTGCCTTCGA AATATTGCAAGTTTTGTCTTGCTCCTCCCACTCCTACTTTTACTAGGTGCTGGTGTCTCCCTGTGGGG CCAGGGAACCTTCTTCTCACTCCTACCAGTGCTGAACTGGACGGCCATGCAGCCAACACAGAGGGTGG ACGATTCCAAGGGCATGCATAGACCTGGCCCTCTTCCCCGAGCCACCTCCAAAGGTTGATCACAAG GCTTCCCAGTGGCCTCAGGAGAGTGACATGGGGCAGAAGGTAGCTTCTTTGAGTGCGCAGTGCCACAA CCATGATGAGAGACTTGACAGAGCTGACAGTCTGCTTCAGAACTACAGATACGGGTAGACCAAGTGG TGACGGCAGGGAAGGGCTGTCACTGTGGGTCAAGAATGTGGTTGGACAGCACCTGCAGGAGATGGGC ACCATAGAACCACCTGATGCTAAGACTGACTTCATGACTTTCCACCATGACCATGAAGTGCGTCTCTCCA ACTTGAAGATGTTCTTAGAAAATGACAGAAAAATCTGAGGCTATCCAGAAGGAGCTGGAAGAAACCA GCTGAAAGCAGGCAGCAGGGATGAAGAGCAGCCCTCCTTGACCGTGTGCAGCACCTAGAAGTGGAA CTGAACCTGTTGAAGTCACAGCTGTGAGACTGGCAGCATCTGAAGACCAGCTGTGAGCAGGCTGGGGC CCGCATCCAGGAGACTGTGAGCTCATGTTCTCTGAGGATCAGCAGGGCGGTTCCCTCGAGTGGCTAT TAGAGAAGCTTTCTTCTCGGTTCTGTGAGCAAGGATGAGCTGCAGGTGCTTACATGACCTTGAGCTGAA ACTGCTGCAGATATCACACACCACATACCGTGACAGGACAGGCCCCGACATCCGAGGCTATTGTGT CTGCCGTGAATCAGGCAGGGATTTTCAGGAATCACAGAAGCGCAAGCACATATCATTGTGAACAATGCTC TGAAGCTGTACTCCCAAGACAAGACGGGGATGGTGGACTTTGCTCTGGAGTCTGGAGGTGGCAGCATC CTAAGCACTCGGTGCTCTGAGACCTATGAGACCAAGACGGCACTGCTGAGCCTGTTTGGGGTCCCACT GTGGTACTTCTCAGTCACTCGAGTGGTGATCCAGCCCCGACATCTACCCAGGGAATTGCTGGGCGTT CAAAGGTTCCAGGGGTACCTGGTGGTGCGGTTGTCCATGAAGATCTACCCAACCACATTCACCATGGA

ACACATTCCAAAGACACTATCACCCACTGGTAACATCTCCAGTGCCCCCAAAGACTTTGCAGTCTATGGA CTGGAAACGGAGTATCAAGAAGAGGGGCAGCCTCTGGGACGGTTACCTATGACCAGGAAGGAGACT CACTCCAGATGTTCCACACACTGGAAAGACCTGACCAAGCCTTCCAGATAGTAGAGTCCGGGTCCTG TCCAACTGGGGCCACCCTGAGTACACTTGCCTCTACCGGTTCCGAGTCCACGGAGAGCCCATCCAGG GAGGCGTGGCGCGCCTCGCCGCAGCCTCCGGCGGCGGAGGCTCTGGCGGAGGGGGCTCCCTCGC AGCAGCCTCTGAATTCATGGTGAGCAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCCATCCTGGTC GAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGCGCGGCGAGGGCGAGGGCGATGCCAC CAACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCCGTGCCCTGGCCACCCT CGTGACCACCCTGACCTACGGCGTGAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGA CTTCTTCAAGTCCGCCATGCCCCGAAGGCTACGTCCAGGAGCGCACCATCAGCTTCAAGGACGACGGC ACCTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAG GGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTTAACAGCCACAA CGTCTATATCACCGCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCACAACGTGG AGGACGGCAGCGTGACGCTCGCCGACCACTACCAGCAGAACACCCCATCGGCGACGGCCCCGTG CTGCTGCCCCGACAACCACTACCTGAGCACCCAGTCCGTGCTGAGCAAAGACCCCAACGAGAAGCGC GATCATATGGTCCTGCTGGAGTTCGTGACCGCGCGCCGGATCACTCTCGGCATGGACGAGCTGTACAA GGGAGGGCGAGGTGCAAGATCTATGGTGAGCAAGGGCGAGGAGCTGTTACCGGGGTGGTGCCCAT CCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGCGCGGCGAGGGCGAGGGCG ATGCCACCAACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCCGTGCCCTGGCC CACCTCTGTGACCACCCTGACCTACGGCGTGAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAG CACGACTTCTTCAAGTCCGCCATGCCCCAAGGCTACGTCCAGGAGCGCACCATCAGCTTCAAGGACG ACGGCACCTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGC TGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTTAACAGC CACAACGTCTATATCACCGCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCACAA CGTGAGGACGGCAGCGTGACGCTCGCCGACCACTACCAGCAGAACACCCCATCGGCGACGGCC CCGTGCTGCTGCCCCGACAACCACTACCTGAGCACCCAGTCCGTGCTGAGCAAAGACCCCAACGAGAA GCGCGATCATATGGTCCTGCTGGAGTTCGTGACCGCGCGCCGGATCACTCTCGGCATGGACGAGCTG TACAAGAGATCTGAATTCGGCGGAGGATCCCCCGGGGGCCGCTCTGAGCAAAAGCTCATTCTGAAGA GGACTTGAATGGAGAACAGAAATTGATCAGTGAGGAAGACCTCAACGGTGAGCAGAAGTTAATATCCGA GGAGGATCTTAATAGTAGCGGCAGTGGTAGCCGCTCTGAGCAAAAGCTCATTCTGAAGAGGACTTGAAT GGAGAACAGAAATTGATCAGTGAGGAAGACCTCAACGGTGAGCAGAAGTTAATATCCGAGGAGGATCTT AATAGTAGCGGTTAATAAGCTTCCTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTGCCCTCCC CCGTGCCCTTCCTTGACCCTGGAAGGTGCCACTCCCACTGTCTTTCTAATAAAATGAGGAAATTGCATC GCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATT GGGAAGACAATAGCAGGCATGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGCATAACGCGCTTAATT AAGGGGGGGATATCGGGTCTATTTAAATTCTGGGGCGCGCTGTCTGGTACCGGGGGGCTCGAGGGGT CTGGCCTTTAAGGCCGGGTCTCCTAGTTTACGTCTGGGGGGCCGGGTCTGTTATCTCTGGGCACCGG TGGGGTCTGTTAACCCGCTGATCAGCCTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGGCCC TCCCCGTGCCCTTCCTTGACCCTGGAAGGTGCCACTCCCACTGTCTTTCTAATAAAATGAGGAAATTG CATCGCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAG GATTGGGAAGACAATAGCAGGCATGCTGGGGATGCGGTGGGCTCTATGG
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Supplementary Table 2. Pathway category terms

endothelial	mesenchymal	adhesion	migration	proliferation
endotheli* vascular process vasculature	chondrocyte connective tissue fibroblast mesenchym*	adhesion cell-substrate encapsulating structure extracellular structure junction matrix permeability	chemotaxis locomo* migration motility movement taxis	proliferation

angiogenesis	immune	inflammation	lipid
angiogenesis artery development blood vessel vascular endothelial growth vasculature development vasculogenesis	B cell eosinophil granulocyte immune leukocyte lymphocyte macrophage mast cell monocyte mononuclear cell myeloid natural killer neutrophil phago* T cell	activation chemokine cytokine inflammat* interferon interleukin NF-kappaB transforming growth factor beta tumor necrosis factor	cholesterol fatty acid lipid lipoprotein triglyceride

* represents zero or more of any character following term

Supplementary Table 3. Composite score gene lists

endothelial cell (n=353)		endothelial-to-mesenchymal transition (n=463)	
<i>A2m</i>	<i>Palm2akap2</i>	<i>Abca10</i>	<i>Itga11</i>
<i>Ackr1</i>	<i>Palmd</i>	<i>Abca6</i>	<i>Itgbl1</i>
<i>Acvrl1</i>	<i>Pcdh1</i>	<i>Abca8</i>	<i>Itih5</i>
<i>Adam15</i>	<i>Pcdh12</i>	<i>Abca9</i>	<i>Itm2a</i>
<i>Adamts1</i>	<i>Pcdh17</i>	<i>Abcc9</i>	<i>Kcnd1</i>
<i>Adamts4</i>	<i>Pde2a</i>	<i>Abi3bp</i>	<i>Kcne4</i>
<i>Adamts9</i>	<i>Pdgfb</i>	<i>Ackr3</i>	<i>Kdelr3</i>
<i>Adcy4</i>	<i>Pear1</i>	<i>Ackr4</i>	<i>Kdm4b</i>
<i>Adgrf5</i>	<i>Pecam1</i>	<i>Acta2</i>	<i>Kera</i>
<i>Adgrl4</i>	<i>Pgm5</i>	<i>Acvrl1</i>	<i>Kiaa0408</i>
<i>Adm5</i>	<i>Pik3r3</i>	<i>Adam33</i>	<i>Kirrel1</i>
<i>Afap1l1</i>	<i>Pkhd1l1</i>	<i>Adamts1</i>	<i>Klf2</i>
<i>Anxa2r</i>	<i>Pkn3</i>	<i>Adamts12</i>	<i>Klf4</i>
<i>Apln</i>	<i>Pla1a</i>	<i>Adamts15</i>	<i>Krt24</i>
<i>Aplnr</i>	<i>Plat</i>	<i>Adamts2</i>	<i>Lama2</i>
<i>Apol3</i>	<i>Plekhhg1</i>	<i>Adamts4</i>	<i>Lama4</i>
<i>Apold1</i>	<i>Plscr4</i>	<i>Adamts5</i>	<i>Lamb1</i>
<i>Aqp1</i>	<i>Plvap</i>	<i>Adamts8</i>	<i>Lamc1</i>
<i>Arap3</i>	<i>Plxnd1</i>	<i>Adamtsl2</i>	<i>Larp7</i>
<i>Arhgap29</i>	<i>Podxl</i>	<i>Adgra2</i>	<i>Lepr</i>
<i>Arhgap31</i>	<i>Postn</i>	<i>Adgrd1</i>	<i>Lgals3</i>
<i>Arhgef15</i>	<i>Prkch</i>	<i>Adh1b</i>	<i>Lhfp16</i>
<i>Art4</i>	<i>Prss23</i>	<i>Adra2c</i>	<i>Lhx5</i>
<i>Atoh8</i>	<i>Prx</i>	<i>Aebp1</i>	<i>Lox</i>
<i>Avpr2</i>	<i>Ptchd3</i>	<i>Agtr1</i>	<i>Loxl1</i>
<i>Bcl6b</i>	<i>Ptprb</i>	<i>Alx4</i>	<i>Lpar4</i>
<i>Bdkrb2</i>	<i>Pxdn</i>	<i>Angpt1</i>	<i>Lrp1</i>
<i>Bmp6</i>	<i>Qrfpr</i>	<i>Angptl1</i>	<i>Lrrc17</i>
<i>Bmpr2</i>	<i>Ramp2</i>	<i>Angptl2</i>	<i>Lrrn4cl</i>
<i>Bmx</i>	<i>Ramp3</i>	<i>Angptl5</i>	<i>Ltbp1</i>
<i>C1qtnf5</i>	<i>Rapgef3</i>	<i>Ankrd35</i>	<i>Ltbp2</i>
<i>C1qtnf9</i>	<i>Rasa4</i>	<i>Aoc3</i>	<i>Ltbp3</i>
<i>C20orf204</i>	<i>Rasip1</i>	<i>Apcdd1l</i>	<i>Ltbp4</i>
<i>C2cd4b</i>	<i>Rassf9</i>	<i>Apod</i>	<i>Lum</i>
<i>C2cd4c</i>	<i>Rflnb</i>	<i>Arsi</i>	<i>Ly6a</i>
<i>Calclrl</i>	<i>Rgs3</i>	<i>Aspn</i>	<i>Mamdc2</i>
<i>Calhm5</i>	<i>Rhoj</i>	<i>Atg5</i>	<i>Map1lc3c</i>
<i>Card10</i>	<i>Ripor1</i>	<i>Axl</i>	<i>Masp1</i>
<i>Card6</i>	<i>Rnd1</i>	<i>B3gnt9</i>	<i>Matn4</i>
<i>Caskin2</i>	<i>Robo4</i>	<i>Barx1</i>	<i>Medag</i>
<i>Casp12</i>	<i>Rpgr</i>	<i>Bdkrb2</i>	<i>Meox2</i>
<i>Cav1</i>	<i>Rspo3</i>	<i>Bgn</i>	<i>Mfap2</i>

<i>Cavin1</i>	<i>S1pr1</i>	<i>Bmp2</i>	<i>Mfap4</i>
<i>Cavin2</i>	<i>Scarf1</i>	<i>Bmp4</i>	<i>Mfap5</i>
<i>Ccdc68</i>	<i>Sele</i>	<i>Bmp5</i>	<i>Mgp</i>
<i>Ccdc85b</i>	<i>Selp</i>	<i>Bmp7</i>	<i>Mmp11</i>
<i>Ccl14</i>	<i>Sema3f</i>	<i>Bmpr2</i>	<i>Mmp14</i>
<i>Ccl23</i>	<i>Sema6b</i>	<i>Boc</i>	<i>Mmp19</i>
<i>Ccm2l</i>	<i>Sh2d3c</i>	<i>C11orf96</i>	<i>Mmp2</i>
<i>Ccn2</i>	<i>Shank3</i>	<i>C16orf89</i>	<i>Mmp23b</i>
<i>Cd34</i>	<i>She</i>	<i>C1qtnf1</i>	<i>Mmp27</i>
<i>Cd93</i>	<i>Shisa3</i>	<i>C1qtnf2</i>	<i>Mmp3</i>
<i>Cdh24</i>	<i>Slc2a3</i>	<i>C1qtnf5</i>	<i>Mmp9</i>
<i>Cdh5</i>	<i>Slc9a3r2</i>	<i>C1qtnf7</i>	<i>Mn1</i>
<i>Cldn5</i>	<i>Slco2a1</i>	<i>C1r</i>	<i>Mrc2</i>
<i>Clec14a</i>	<i>Slco4a1</i>	<i>C1s</i>	<i>Mrgprf</i>
<i>Clec1a</i>	<i>Smad1</i>	<i>C7</i>	<i>Mrtfa</i>
<i>Clec1b</i>	<i>Smad6</i>	<i>Calhm2</i>	<i>Msc</i>
<i>Clec3b</i>	<i>Snai1</i>	<i>Calhm5</i>	<i>Mt1a</i>
<i>Clec4m</i>	<i>Sncg</i>	<i>Ccdc80</i>	<i>Musk</i>
<i>Clic2</i>	<i>Snrk</i>	<i>Ccl11</i>	<i>Mxra5</i>
<i>Cntnap3b</i>	<i>Socs2</i>	<i>Ccl14</i>	<i>Mxra8</i>
<i>Col15a1</i>	<i>Socs3</i>	<i>Ccl19</i>	<i>Myc</i>
<i>Col4a1</i>	<i>Sox17</i>	<i>Ccl23</i>	<i>Myoc</i>
<i>Cplx1</i>	<i>Sox18</i>	<i>Ccl26</i>	<i>Nampt</i>
<i>Cpxm2</i>	<i>Sox7</i>	<i>Ccl8</i>	<i>Ndn</i>
<i>Crhbp</i>	<i>Spaar</i>	<i>Ccn1</i>	<i>Nfatc1</i>
<i>Crip2</i>	<i>Sparc</i>	<i>Ccn2</i>	<i>Nfatc4</i>
<i>Csf3</i>	<i>Sparcl1</i>	<i>Ccn3</i>	<i>Nfe2l2</i>
<i>Cthrc1</i>	<i>Spns2</i>	<i>Ccn4</i>	<i>Nid1</i>
<i>Cx3cl1</i>	<i>Spry1</i>	<i>Ccn5</i>	<i>Nid2</i>
<i>Cxcl12</i>	<i>Spry4</i>	<i>Cd248</i>	<i>Nnmt</i>
<i>Cyp1a1</i>	<i>Srpx</i>	<i>Cd34</i>	<i>Notch3</i>
<i>Cytl1</i>	<i>St8sia6</i>	<i>Cd44</i>	<i>Nova1</i>
<i>Cyyr1</i>	<i>Stab1</i>	<i>Cd70</i>	<i>Nox4</i>
<i>Dchs1</i>	<i>Stab2</i>	<i>Cd90</i>	<i>Nppc</i>
<i>Depp1</i>	<i>Stard8</i>	<i>Cdc42ep2</i>	<i>Npr1</i>
<i>Dipk1b</i>	<i>Stc1</i>	<i>Cdh11</i>	<i>Npy1r</i>
<i>Dipk2b</i>	<i>Sting1</i>	<i>Cdh13</i>	<i>Npy5r</i>
<i>Dkk2</i>	<i>Stom</i>	<i>Cdh2</i>	<i>Nr2f1</i>
<i>Dll4</i>	<i>Sult1c4</i>	<i>Cfd</i>	<i>Nr4a1</i>
<i>Dnase1l3</i>	<i>Swap70</i>	<i>Cfh</i>	<i>Nupr1</i>
<i>Doc2b</i>	<i>Syt15</i>	<i>Chrd</i>	<i>Nxph3</i>
<i>Dock6</i>	<i>Syt15b</i>	<i>Chrdl1</i>	<i>Oaf</i>
<i>Dynlt5</i>	<i>Tal1</i>	<i>Cilp</i>	<i>Ogn</i>
<i>Dysf</i>	<i>Tas2r31</i>	<i>Cldn6</i>	<i>Oit3</i>
<i>Ebf3</i>	<i>Tbxa2r</i>	<i>Clec11a</i>	<i>Olfml1</i>

<i>Ecscr</i>	<i>Tek</i>	<i>Clec1b</i>	<i>Olfml2a</i>
<i>Edn1</i>	<i>Tgfbr2</i>	<i>Clec3b</i>	<i>Olfml2b</i>
<i>Ednrb</i>	<i>Tgfbr3</i>	<i>Clec4m</i>	<i>Olfml3</i>
<i>Efcc1</i>	<i>Tgm2</i>	<i>Clmp</i>	<i>Omd</i>
<i>Efnb2</i>	<i>Thbd</i>	<i>Clock</i>	<i>Osr1</i>
<i>Egfl7</i>	<i>Thsd1</i>	<i>Cnn1</i>	<i>P2rx2</i>
<i>Ehd3</i>	<i>Tie1</i>	<i>Col12a1</i>	<i>Pcdh18</i>
<i>Elfn1</i>	<i>Timp3</i>	<i>Col14a1</i>	<i>Pcdhb11</i>
<i>Elk3</i>	<i>Tm4sf1</i>	<i>Col15a1</i>	<i>Pcdhb12</i>
<i>Emcn</i>	<i>Tm4sf18</i>	<i>Col1a1</i>	<i>Pcdhb15</i>
<i>Emp1</i>	<i>Tmem100</i>	<i>Col1a2</i>	<i>Pcdhb16</i>
<i>Eng</i>	<i>Tmem121</i>	<i>Col3a1</i>	<i>Pcdhb3</i>
<i>Ensg00000284969</i>	<i>Tmem204</i>	<i>Col4a1</i>	<i>Pcdhb4</i>
<i>Entpd1</i>	<i>Tmem255b</i>	<i>Col4a2</i>	<i>Pcdhga12</i>
<i>Epas1</i>	<i>Tmem273</i>	<i>Col5a1</i>	<i>Pcdhga2</i>
<i>Ephb4</i>	<i>Tmem44</i>	<i>Col5a2</i>	<i>Pcdhga3</i>
<i>Erg</i>	<i>Tmem88</i>	<i>Col6a1</i>	<i>Pcdhgb7</i>
<i>Esam</i>	<i>Tmtc1</i>	<i>Col6a2</i>	<i>Pcdhgc3</i>
<i>Esm1</i>	<i>Tnfrsf10d</i>	<i>Col6a3</i>	<i>Pcolce</i>
<i>Ets1</i>	<i>Tnfrsf4</i>	<i>Col6a5</i>	<i>Pcolce2</i>
<i>Exoc3l1</i>	<i>Tns2</i>	<i>Col6a6</i>	<i>Pdcd1lg2</i>
<i>Exoc3l2</i>	<i>Tpo</i>	<i>Col8a1</i>	<i>Pdgfa</i>
<i>F2r</i>	<i>Trappc3l</i>	<i>Col8a2</i>	<i>Pdgfb</i>
<i>F2rl3</i>	<i>Tspan18</i>	<i>Comp</i>	<i>Pdgfd</i>
<i>F8</i>	<i>Tspan7</i>	<i>Copz2</i>	<i>Pdgfra</i>
<i>Fam107a</i>	<i>Ushbp1</i>	<i>Cpxm1</i>	<i>Pdgfrb</i>
<i>Fam110d</i>	<i>Vamp5</i>	<i>Cpz</i>	<i>Pdgfrl</i>
<i>Fam124b</i>	<i>Vcam1</i>	<i>Crhbp</i>	<i>Pi16</i>
<i>Fam167b</i>	<i>Vegfc</i>	<i>Crispld2</i>	<i>Pkd1l2</i>
<i>Fam241a</i>	<i>Vwf</i>	<i>Crlf1</i>	<i>Pla2g2a</i>
<i>Fam43a</i>	<i>Wwtr1</i>	<i>Csf1</i>	<i>Plac9</i>
<i>Fat4</i>	<i>Xaf1</i>	<i>Cthrc1</i>	<i>Plagl1</i>
<i>Fcgr2b</i>	<i>Znf366</i>	<i>Ctsk</i>	<i>Plat</i>
<i>Fcn2</i>	<i>Znf792</i>	<i>Ctsl</i>	<i>Plod1</i>
<i>Fcn3</i>		<i>Cxcl12</i>	<i>Plpp3</i>
<i>Fgd5</i>		<i>Cxcl14</i>	<i>Pmp22</i>
<i>Fgf23</i>		<i>Cybrd1</i>	<i>Podn</i>
<i>Fli1</i>		<i>Cygb</i>	<i>Poglut3</i>
<i>Flt1</i>		<i>Cyp1b1</i>	<i>Postn</i>
<i>Flt4</i>		<i>Cyp2w1</i>	<i>Prdm6</i>
<i>Fmo2</i>		<i>Dbn1</i>	<i>Prelp</i>
<i>Foxc1</i>		<i>Dchs1</i>	<i>Prrx1</i>
<i>Foxc2</i>		<i>Dcn</i>	<i>Prrx2</i>
<i>Foxf1</i>		<i>Ddr2</i>	<i>Ptgdr2</i>
<i>Foxp1</i>		<i>Des</i>	<i>Ptgfr</i>

<i>Fzd4</i>	<i>Dkk2</i>	<i>Ptx3</i>
<i>Galnt15</i>	<i>Dnase1l3</i>	<i>Pxdn</i>
<i>Gask1b</i>	<i>Dpt</i>	<i>Rcn3</i>
<i>Gbp4</i>	<i>Dut</i>	<i>Ripor3</i>
<i>Gdf3</i>	<i>Ebf1</i>	<i>Rspo1</i>
<i>Ggt5</i>	<i>Ebf2</i>	<i>Rspo3</i>
<i>Gimap1</i>	<i>Ebf3</i>	<i>S100a4</i>
<i>Gimap4</i>	<i>Ecm1</i>	<i>S1pr3</i>
<i>Gimap5</i>	<i>Ecm2</i>	<i>Scara5</i>
<i>Gimap6</i>	<i>Efemp1</i>	<i>Scarf2</i>
<i>Gimap7</i>	<i>Efemp2</i>	<i>Scube3</i>
<i>Gimap8</i>	<i>Elane</i>	<i>Sdc2</i>
<i>Gipc3</i>	<i>Eln</i>	<i>Sema7a</i>
<i>Gja4</i>	<i>Emilin1</i>	<i>Serpina3</i>
<i>Gja5</i>	<i>En1</i>	<i>Serpine1</i>
<i>Gng11</i>	<i>F10</i>	<i>Serpinf1</i>
<i>Gpr146</i>	<i>F2r</i>	<i>Serping1</i>
<i>Gpr4</i>	<i>F2rl2</i>	<i>Serpinh1</i>
<i>Gpr68</i>	<i>Fam167b</i>	<i>Sfrp1</i>
<i>Grap</i>	<i>Fam180a</i>	<i>Sfrp2</i>
<i>Grapl</i>	<i>Fam180b</i>	<i>Sfrp4</i>
<i>Heg1</i>	<i>Fam43b</i>	<i>Shisa3</i>
<i>Hhex</i>	<i>Fap</i>	<i>Slit3</i>
<i>Hif3a</i>	<i>Fat4</i>	<i>Smad2</i>
<i>Hla-e</i>	<i>Fbln1</i>	<i>Smad3</i>
<i>Hlx</i>	<i>Fbln2</i>	<i>Smad4</i>
<i>Hmcn1</i>	<i>Fbln5</i>	<i>Smim41</i>
<i>Hoxd10</i>	<i>Fbln7</i>	<i>Smoc2</i>
<i>Hoxd9</i>	<i>Fbn1</i>	<i>Smtn</i>
<i>Hspa12b</i>	<i>Fcgr2b</i>	<i>Snai1</i>
<i>Hspg2</i>	<i>Fcn2</i>	<i>Snai2</i>
<i>Hyal2</i>	<i>Fcn3</i>	<i>Sned1</i>
<i>Icam1</i>	<i>Fgf10</i>	<i>Sod2</i>
<i>Icam2</i>	<i>Fgf16</i>	<i>Sod3</i>
<i>Icam4</i>	<i>Fgf2</i>	<i>Sox11</i>
<i>Ifi27</i>	<i>Fgf7</i>	<i>Sox2</i>
<i>Ifi44</i>	<i>Fgfr1</i>	<i>Sp1</i>
<i>Ifi44l</i>	<i>Fibin</i>	<i>Sp5</i>
<i>Ifitm1</i>	<i>Fkbp10</i>	<i>Sparc</i>
<i>Igfbp4</i>	<i>Fkbp7</i>	<i>Sparcl1</i>
<i>Il18bp</i>	<i>Fmo2</i>	<i>Spocd1</i>
<i>Il33</i>	<i>Fmod</i>	<i>Spon2</i>
<i>Il3ra</i>	<i>Fn1</i>	<i>Spry1</i>
<i>Il6</i>	<i>Fndc1</i>	<i>Spry2</i>
<i>Itga1</i>	<i>Foxf1</i>	<i>Srpx</i>

<i>Itga10</i>	<i>Foxf2</i>	<i>Srpx2</i>
<i>Itm2a</i>	<i>Fst</i>	<i>Ssc5d</i>
<i>Jag2</i>	<i>Fstl1</i>	<i>Sspn</i>
<i>Jam2</i>	<i>Fzd4</i>	<i>Stab1</i>
<i>Jcad</i>	<i>Gabrp</i>	<i>Stab2</i>
<i>Kank3</i>	<i>Galnt15</i>	<i>Sulf1</i>
<i>Kctd12</i>	<i>Galnt16</i>	<i>Svep1</i>
<i>Kdr</i>	<i>Gas1</i>	<i>Tac3</i>
<i>Kif17</i>	<i>Gas7</i>	<i>Tagln</i>
<i>Kif26a</i>	<i>Gata4</i>	<i>Tbx15</i>
<i>Klf2</i>	<i>Gata6</i>	<i>Tbxa2r</i>
<i>Layn</i>	<i>Gdf10</i>	<i>Tceal7</i>
<i>Lcn6</i>	<i>Gdf6</i>	<i>Tcf21</i>
<i>Ldlrad2</i>	<i>Gem</i>	<i>Tgfb1</i>
<i>Lepr</i>	<i>Gfpt2</i>	<i>Tgfb2</i>
<i>Lifr</i>	<i>Gfra1</i>	<i>Tgfb3</i>
<i>Lims2</i>	<i>Ggt5</i>	<i>Tgfb1</i>
<i>Lmcd1</i>	<i>Glt8d2</i>	<i>Tgfb1</i>
<i>Lmo2</i>	<i>Gpc3</i>	<i>Tgfb2</i>
<i>Lrrc32</i>	<i>Gpnmb</i>	<i>Tgfb3</i>
<i>Lrrc70</i>	<i>Gpx8</i>	<i>Thbs2</i>
<i>Lyve1</i>	<i>Gsc</i>	<i>Thbs4</i>
<i>Madcam1</i>	<i>Gsn</i>	<i>Thy1</i>
<i>Map3k6</i>	<i>Gstm5</i>	<i>Timp1</i>
<i>Mapk11</i>	<i>Gxylt2</i>	<i>Timp2</i>
<i>Mapk12</i>	<i>Hand1</i>	<i>Timp3</i>
<i>Mcam</i>	<i>Hapln1</i>	<i>Tmem100</i>
<i>Mcf2l</i>	<i>Has2</i>	<i>Tmem119</i>
<i>Meox1</i>	<i>Hdac3</i>	<i>Tmem200b</i>
<i>Meox2</i>	<i>Hdac9</i>	<i>Tmem204</i>
<i>Mfng</i>	<i>Hgf</i>	<i>Tmem35b</i>
<i>Mkl1</i>	<i>Hic1</i>	<i>Tmsb4x</i>
<i>Mmrn2</i>	<i>Hmcn1</i>	<i>Tnc</i>
<i>Mrtfb</i>	<i>Hmcn2</i>	<i>Tnfaip6</i>
<i>Myct1</i>	<i>Hmga2</i>	<i>Tnn</i>
<i>Nes</i>	<i>Hoxc6</i>	<i>Tnxb</i>
<i>Neurl1b</i>	<i>Hoxc8</i>	<i>Trabd2b</i>
<i>Nhs12</i>	<i>Hs3st3a1</i>	<i>Trdv3</i>
<i>Nos3</i>	<i>Hspb6</i>	<i>Tril</i>
<i>Nostrin</i>	<i>Hspg2</i>	<i>Twist1</i>
<i>Notch1</i>	<i>Htra1</i>	<i>Twist2</i>
<i>Notch4</i>	<i>Htra3</i>	<i>Vasn</i>
<i>Nova2</i>	<i>Id1</i>	<i>Vcan</i>
<i>Npdc1</i>	<i>Igdcc4</i>	<i>Vegfd</i>
<i>Npr1</i>	<i>Igf1</i>	<i>Vim</i>

<i>Nr5a2</i>	<i>Igfbp4</i>	<i>Vit</i>
<i>Nrn1</i>	<i>Igfbp5</i>	<i>Vstm2a</i>
<i>Nrp1</i>	<i>Igfbp6</i>	<i>Wdr86</i>
<i>Nuak1</i>	<i>Il15ra</i>	<i>Wnt10b</i>
<i>Oit3</i>	<i>Il33</i>	<i>Wnt11</i>
<i>Olfm1</i>	<i>Il6</i>	<i>Wnt2</i>
<i>Olfml2a</i>	<i>Inhba</i>	<i>Xg</i>
<i>Or52n5</i>	<i>Inmt</i>	<i>Zeb1</i>
<i>Osmr</i>	<i>Islr</i>	<i>Zeb2</i>
<i>Pabpc4l</i>	<i>Isml</i>	