

Online Supplemental Material

Embryological-origin-dependent differences in Homeobox expression in adult aorta: Role in regional phenotypic variability and regulation of NF- κ B activity

Laia Trigueros-Motos¹, José M. González-Granado¹, Christine Cheung^{2,†}, Patricia Fernández^{1,††}, Fátima Sánchez-Cabo³, Ana Dopazo⁴, Sanjay Sinha², Vicente Andrés^{1,*}

¹Departamento de Epidemiología, Aterotrombosis e Imagen, Centro Nacional de Investigaciones Cardiovasculares (CNIC)

²The Anne McLaren Laboratory for Regenerative Medicine, University of Cambridge, Cambridge. Division of Cardiovascular Medicine, University of Cambridge, Addenbrooke's Hospital, Cambridge, UK.

³Bioinformatics Unit, CNIC

⁴Genomics Unit, CNIC.

[†] **Current Address:** Institute of Molecular and Cell Biology, Biopolis, Proteos, Singapore

^{††} **Current Address:** National Cancer Institute, NIH, 41 Library Drive, Bldg. 41, B513 Bethesda, 22 MD 20892, USA

*** Address for correspondence:**

V. Andrés, PhD
Laboratory of Molecular and Genetic Cardiovascular Pathophysiology
Departamento de Epidemiología, Aterotrombosis e Imagen
Centro Nacional de Investigaciones Cardiovasculares (CNIC)
Melchor Fernández Almagro 3, 28029 Madrid (Spain)
Phone: +34-91 453 12 00 (Ext. 1502)
Fax: +34-91 453 12 65
E-mail: vandres@cnic.es

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Supplemental Table I: Sequence of primers used for quantitative polymerase chain reaction

Gene	Species	Forward primer (5' to 3')	Reverse primer (5' to 3')
<i>Hoxa1</i>	Mouse	GCCCTGGCCACGTATAATAA [#]	TCCAAC TTCCCTGTTTTGG [#]
<i>Hoxa2</i>	Mouse	CCACAAAGAATCCCTGGAAA	GGGGTCTGCAAAGGTACTTG
<i>Hoxa6</i>	Mouse	AAGGCACCGACCGGAAGTAC	CACCCGCACAGGAATTCATC
<i>Hoxb6</i>	Mouse	CTCCCTCCCCGAAGAAC	TGCTTCCAGGAGACATCAAGTG
<i>Hoxc6</i>	Mouse	CACCGCCTATGATCCAGTGA	GCGAATAAAAGGGAGTCGAGTAGA
<i>Hoxa7</i>	Mouse	CCTCGTAAAACCGACACTGAAAG	GCGCGTTCACATAATACGAAGA
<i>Hoxb7</i>	Mouse	CAGACCCTGGAGCTGGAGAA	AGAGCGTGTGCGCGATCT
<i>Hoxb8</i>	Mouse	CTCTAATGGATGCAAATGATGGTG	AAGAAGGGATGCCAGTTCATAAAC
<i>Hoxc8</i>	Mouse	AACTCGGGCTACCAGCAGAAC [#]	GAGCGCCTCGTAGCCATAGA [#]
<i>Hoxd8</i>	Mouse	TCAGAGCTCGTCTCCTTCTCAA	AGGTTTGTCTTCTCTCCGTCTAC
<i>Hoxa9</i>	Mouse	GGCGCCGGCAACTTATTAG	GCCGAAATTATGAAACTGCAGAT
<i>Hoxb9</i>	Mouse	GGCCTGTGGGCAGATGTG	CTTCATAAAACCACTCCCTGCTTT
<i>Hoxc9</i>	Mouse	GCAGCAAGCACAAAGAGGAGAAG [#]	GCGTCTGGTACTTGGTGTAGGG
<i>Hoxd9</i>	Mouse	CCAAGTGGCTTTGGAGTCTTG	TGCGTGCACTCACAAAATATAGC
<i>Hoxa10</i>	Mouse	GAGAGCGGCGCCTAGAGAT	TCATCCTGCGATTCTGAAACC
<i>Hoxc10</i>	Mouse	GACAGCAAAGAGCGGAAGGA [#]	GCTCTCGCGTCAAATACATATTGA [#]
<i>Hoxd10</i>	Mouse	GCTGGTCCCCGAGTCTTGT	GTGGCGTAGGTCTGACTCAGTCT
<i>Hoxa1</i>	Rat	GCCCTGGCCACGTATAATAA [#]	TCCAAC TTCCCTGTTTTGG [#]
<i>Hoxa2</i>	Rat	GAACCGGAGGATGAAGCATA	GGGCTTGCTCAAAGAGTGAC
<i>Hoxc8</i>	Rat	AACTCGGGCTACCAGCAGAAC [#]	GAGCGCCTCGTAGCCATAGA [#]
<i>Hoxa9</i>	Rat	CAGTTCAGGACCCGATAGGA	AGGTAGCGGTTGAAGTGGA
<i>Hoxc9</i>	Rat	GCAGCAAGCACAAAGAGGAGAAG [#]	TCCAGCGTCTGGTACTTGGTGTA

<i>Hoxc10</i>	Rat	GACAGCAAAGAGCGGAAGGA [#]	GCTCTCGCGTCAAATACATATTGA [#]
<i>HOXC6</i>	Human	TGTCCTGGATTGGAGCCGTCC	GCAACGGCCGCTCCATAGGT
<i>HOXB7</i>	Human	AAACGTCCCTGCCTACAAATCATCC	TGGGAAGGCTCCGGTAGCGAA
<i>HOXC8</i>	Human	ACCGGCCTATTACGACTGC	TGCTGGTAGCCTGAGTTGGA
<i>HOXA9</i>	Human	TACGTGGACTCGTTCCTGCT	CGTCGCCTTGGACTGGAAG
<i>HOXA10</i>	Human	GGGCTATCTGCTCCCTTCGCC	AAAAGAGTTCGCGGCGGGGC
<i>HOXC8</i>	Pig	GTCTCCCAGCCTCATGTTTC	CAAGGTCTGATACCGGCTGT
<i>HOXA9</i>	Pig	TTGCAGCTTCCAGTCCAAG	TGGTGGTGATGGTGGTGATA
<i>HOXC10</i>	Pig	AGCCCAGACACTTCGGATAA	CCTCTTCTTCCTTCCGCTCT
<i>GAPDH*</i>	Pig	GGGCGTGAACCATGAGAAGT	GATGCCGAAGTGGTCATGG
<i>18S*</i>	Mouse	CGGACAGGATTGACAGATTG	CAAATCGCTCCACCAACTAA
<i>18S*</i>	Rat	CGGCTACCACATCCAAGGAA	AGCTGGAATTACCGCGGC
<i>PBGD*</i>	Human	ATTACCCCGGGAGACTGAAC	GGCTGTTGCTTGGACTTCTC

[#] Identical in mouse and rat

* Housekeeping genes used for normalization of mRNA expression

Supplemental Table II. Differentially expressed genes in TA compared with AA only in apoE-KO mice

			apoE-KO		
GeneSymbol	Description	GenbankAcc	logFC	adjpval	fold-change
LOWER LEVELS					
Pde1c	phosphodiesterase 1C, transcript variant 2	NM_001025568	-3.77	3.88E-03	0.07
A730017C20Rik	RIKEN cDNA A730017C20 gene	NM_173759	-3.14	6.08E-05	0.11
Upk1b	uroplakin 1B	NM_178924	-2.88	6.54E-03	0.14
AK052098	12 days embryo eyeball cDNA, RIKEN full-length enriched library, clone:D230045O05 product:unclassifiable	AK052098	-2.69	2.85E-02	0.15
Upk3b	uroplakin 3B	NM_175309	-2.56	3.96E-03	0.17
A430084P05Rik	RIKEN cDNA A430084P05 gene	NM_001045526	-2.47	3.18E-02	0.18
E330039K12Rik	RIKEN cDNA E330039K12 gene, transcript variant 2	NM_175561	-2.26	5.53E-03	0.21
Dync1i1	dynein cytoplasmic 1 intermediate chain 1	NM_010063	-2.24	1.02E-03	0.21
Msln	mesothelin	NM_018857	-2.23	1.35E-02	0.21
Cd5l	CD5 antigen-like	NM_009690	-2.16	1.88E-03	0.22
Aqp5	aquaporin 5	NM_009701	-2.16	7.22E-03	0.22
Lrp2	low density lipoprotein receptor-related protein 2	NM_001081088	-2.09	2.87E-02	0.24
Muc16	18-day embryo whole body cDNA, RIKEN full-length enriched library, clone:1110009I14 product:hypothetical SEA domain containing protein	AK003577	-2.07	2.96E-02	0.24
Mdga2	MAM domain containing glycosylphosphatidylinositol anchor 2	NM_207010	-2.07	1.09E-03	0.24
Smc1b	structural maintenance of chromosomes 1B	NM_080470	-2.06	2.59E-04	0.24
Best3	7 days embryo whole body cDNA, RIKEN full-length enriched library, clone:C430017E22 product:unclassifiable	AK049492	-2.05	1.73E-02	0.24
I300002K09Rik	RIKEN cDNA I300002K09 gene	NM_028788	-2.03	1.15E-03	0.24
AK031009	adult male thymus cDNA, RIKEN full-length enriched library, clone:5830487P08 product:unclassifiable	AK031009	-2.02	1.79E-02	0.25
Nkx6-2	NK6 transcription factor related, locus 2 (Drosophila)	NM_183248	-1.99	3.05E-02	0.25
Galnt3	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglucosaminyltransferase 3	NM_015736	-1.98	1.41E-02	0.25
Galnt14	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylglucosaminyltransferase 14	NM_027864	-1.94	1.22E-03	0.26
3110039M20Rik	10 days neonate cortex cDNA, RIKEN full-length enriched library, clone:A830072J11 product:unclassifiable	AK043991	-1.90	1.19E-02	0.27
Lphn3	mRNA for mKIAA0768 protein	AK122367	-1.87	1.77E-02	0.27
Mcoln3	12 days embryo male wolffian duct includes surrounding region cDNA, RIKEN full-length enriched library, clone:6720490Q21 product:weakly similar to MUCOLIPIDIN [Homo sapiens]	AK033008	-1.83	3.65E-03	0.28
Lef1	lymphoid enhancer binding factor 1	NM_010703	-1.81	2.95E-02	0.29
2310032F03Rik	RIKEN cDNA 2310032F03 gene	NM_029723	-1.73	9.64E-04	0.30
Dlx5	distal-less homeobox 5, transcript variant 1	NM_010056	-1.71	2.56E-04	0.30
Dpp10	dipeptidylpeptidase 10	NM_199021	-1.71	4.65E-04	0.31
Tnfrsf18	tumor necrosis factor (ligand) superfamily, member 18	NM_183391	-1.69	1.61E-03	0.31
Cd22	CD22 antigen, transcript variant 2	NM_009845	-1.68	2.96E-04	0.31
AK038516	adult male hypothalamus cDNA, RIKEN full-length enriched library, clone:A230021N08 product:unclassifiable	AK038516	-1.68	2.51E-04	0.31
Atp6v0d2	ATPase, H+ transporting, lysosomal V0 subunit D2	NM_175406	-1.65	9.50E-04	0.32
Pcdh20	protocadherin 20	NM_178685	-1.61	3.65E-03	0.33
Dlk1	adipocyte differentiation-associated protein (pref-1) mRNA, complete cds	L12721	-1.61	1.70E-03	0.33
Krt1dap	keratinocyte differentiation associated protein	NM_001033131	-1.61	7.58E-03	0.33
Itgb8	16 days embryo head cDNA, RIKEN full-length enriched library, clone:C130086L01 product:hypothetical protein	AK140969	-1.59	6.23E-03	0.33
BC065085	cDNA sequence BC065085	NM_177628	-1.58	4.69E-03	0.33
Krt19	keratin 19	NM_008471	-1.55	1.38E-02	0.34
Cybrd1	adult male urinary bladder cDNA, RIKEN full-length enriched library, clone:9530059N16 product:cytochrome b reductase 1	AK162525	-1.54	3.73E-02	0.34
Clec1b	C-type lectin domain family 1, member b	NM_019985	-1.47	1.10E-02	0.36
Rspo3	R-spondin 3 homolog (Xenopus laevis)	NM_028351	-1.44	2.91E-02	0.37
AK076954	adult male testis cDNA, RIKEN full-length enriched library, clone:4930571N02 product:unclassifiable	AK076954	-1.41	1.73E-02	0.38
Cfi	complement component factor i	NM_007686	-1.39	1.64E-02	0.38
Cyp2s1	cytochrome P450, family 2, subfamily s, polypeptide 1	NM_028775	-1.39	1.60E-02	0.38
Slc26a3	solute carrier family 26, member 3, mRNA (cDNA clone IMAGE:4989186), complete cds	BC037066	-1.33	5.84E-03	0.40
Kif1a	kinesin family member 1A	NM_008440	-1.31	2.30E-03	0.40
Mrgprg	MAS-related GPR, member G	NM_203492	-1.31	9.69E-03	0.40
Clec7a	C-type lectin domain family 7, member a	NM_020008	-1.30	1.07E-02	0.41
Kcnj15	potassium inwardly-rectifying channel, subfamily J, member 15, transcript variant 2	NM_019664	-1.29	1.21E-02	0.41
AK083893	12 days embryo spinal ganglion cDNA, RIKEN full-length enriched library, clone:D130052E13 product:unclassifiable	AK083893	-1.27	3.25E-02	0.41
Crym	crystallin, mu	NM_016669	-1.26	6.73E-03	0.42
BC062650	adult male thymus cDNA, RIKEN full-length enriched library, clone:5830402J09 product:hypothetical protein	AK030792	-1.26	1.25E-02	0.42
Gngt2	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2 [Source:MarkerSymbol;Acc.MGI:893584] [ENSMUST00000036088]		-1.23	1.22E-03	0.43
Cd28	CD28 antigen	NM_007642	-1.21	2.10E-03	0.43
App	mouse amyloid beta protein precursor, complete cds	M18373	-1.20	8.95E-03	0.43
Mpeg1	macrophage expressed gene 1	NM_010821	-1.20	5.65E-03	0.43
Faim2	Fas apoptotic inhibitory molecule 2, transcript variant 1	NM_028224	-1.20	1.51E-02	0.44
Trpm2	transient receptor potential cation channel, subfamily M, member 2	NM_138301	-1.19	1.75E-02	0.44
Cnnm1	cyclin M1	NM_031396	-1.18	8.28E-03	0.44
AW125753	expressed sequence AW125753	NM_029007	-1.17	2.47E-03	0.44
Apoc4	apolipoprotein C-IV	NM_007385	-1.15	1.60E-02	0.45
9630001P10Rik	7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730006F04 product:unclassifiable	AK080411	-1.15	4.37E-02	0.45
AK051975	12 days embryo eyeball cDNA, RIKEN full-length enriched library, clone:D230028L16 product:unclassifiable	AK051975	-1.15	1.44E-02	0.45
Tspan8	tetraspanin 8	NM_146010	-1.14	2.29E-02	0.45
4933409K07Rik	10 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:B930024G13	AK047126	-1.14	1.12E-02	0.45
Npy1r	neuropeptide Y receptor Y1	NM_010934	-1.14	2.92E-03	0.45
Tcf23	transcription factor 23	NM_053085	-1.10	1.10E-02	0.47
2810046M22Rik	RIKEN cDNA 2810046M22 gene	NM_001081441	-1.10	4.78E-02	0.47
Trem2	triggering receptor expressed on myeloid cells 2	NM_031254	-1.10	1.35E-03	0.47
Spic	Spi-C transcription factor (Spi-1/PU.1 related)	NM_011461	-1.10	3.13E-02	0.47
Fsd1	fibronectin type 3 and SPRY domain-containing protein	NM_183178	-1.09	3.12E-02	0.47
Dact2	3 days neonate thymus cDNA, RIKEN full-length enriched library, clone:A630024E20 product:weakly similar to HYPOTHETICAL_39.6.KDA.PROTEIN [Homo sapiens]	AK041604	-1.09	3.76E-02	0.47
Lgal53	lectin, galactose binding, soluble 3	NM_010705	-1.08	7.63E-04	0.47
C130071C03Rik	16 days embryo head cDNA, RIKEN full-length enriched library, clone:C130071C03 product:hypothetical protein	AK048540	-1.07	2.75E-03	0.48
Gpnmb	glycoprotein (transmembrane) nmb	NM_053110	-1.06	1.51E-03	0.48
Slc40a1	solute carrier family 40 (iron-regulated transporter), member 1	NM_016917	-1.05	1.81E-03	0.48
Prdm8	PR domain containing 8	NM_029947	-1.04	7.06E-03	0.49
C77080	expressed sequence C77080	NM_001033189	-1.03	6.81E-03	0.49
Slc8a3	solute carrier family 8 (sodium/calcium exchanger), member 3, mRNA (cDNA clone MGC:63358 IMAGE:6837128), complete cds	BC052435	-1.03	3.18E-02	0.49
Abcc3	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	NM_029600	-1.03	6.35E-04	0.49
Gfi1	growth factor independent 1	NM_010278	-1.02	2.73E-02	0.49
Cacna1d	calcium channel, voltage-dependent, L type, alpha 1D subunit, transcript variant 1	NM_028981	-1.02	1.56E-02	0.49
ENSMUSG0000005501	adult male aorta and vein cDNA, RIKEN full-length enriched library, clone:A530075A22 product:hypothetical tripartite motif protein 29	AK080168	-1.02	4.10E-02	0.49
Trim29	tripartite motif protein 29	NM_023655	-1.02	2.83E-02	0.49
Serpina1b	serine (or cysteine) peptidase inhibitor, clade A, member 1b, mRNA (cDNA clone IMAGE:5125410)	BC037008	-1.01	4.01E-02	0.50
Gpr162	G protein-coupled receptor 162	NM_013533	-1.01	3.51E-04	0.50
HIGHER LEVELS					
Has1	hyaluronan synthase1	NM_008215	1.01	4.78E-02	2.01
Ffar2	free fatty acid receptor 2	NM_146187	1.02	1.67E-02	2.02
Olfra494	olfactory receptor 494	NM_146737	1.02	2.48E-02	2.03
Foxa2	forkhead box A2	NM_010446	1.04	1.52E-02	2.05
Nrgfb	nerve growth factor, beta	NM_013609	1.04	3.16E-03	2.06
Mfsd4	major facilitator superfamily domain containing 4	NM_172510	1.05	2.75E-02	2.07
Car6	carbonic anhydrase 6	NM_009802	1.10	2.54E-02	2.14
Vsig4	V-set and immunoglobulin domain containing 4	NM_177789	1.16	4.88E-03	2.23
AK086365	15 days embryo head cDNA, RIKEN full-length enriched library, clone:D930024D10 product:unclassifiable	AK086365	1.19	3.99E-02	2.28

Unc13c	unc-13 homolog C (C. elegans)	NM_001081153	1,21	1,44E-02	2,31
AK038533	adult male hypothalamus cDNA, RIKEN full-length enriched library, clone:A230027N07 product:unclassifiable	AK038533	1,22	3,18E-03	2,33
Aqbl2	ATP/GTP binding protein-like 2	NM_178755	1,30	3,96E-02	2,47
4930505D03Rik	RIKEN cDNA 4930505D03 gene, mRNA (cDNA clone IMAGE:6834536), containing frame-shift errors	BC072607	1,32	1,71E-02	2,50
A1836003	expressed sequence A1836003	NM_177716	1,32	2,44E-03	2,50
Klrg1	killer cell lectin-like receptor subfamily G, member 1	NM_016970	1,33	3,96E-02	2,51
Chl1	cell adhesion molecule with homology to L1CAM	NM_007697	1,37	1,21E-02	2,59
Vipr2	vasoactive intestinal peptide receptor 2	NM_009511	1,38	4,65E-02	2,60
TC1755975	MUSMUP3A major urinary protein III (Mus musculus) (exp=-1; wqp=0; cq=0), partial (40%)		1,40	1,70E-03	2,65
Serpina3n	serine (or cysteine) peptidase inhibitor, clade A, member 3N	NM_009252	1,41	4,76E-04	2,66
1700109F18Rik	2 days pregnant adult female ovary cDNA, RIKEN full-length enriched library, clone:E330022G09 product:unclassifiable	AK054396	1,47	9,16E-03	2,78
AK051389	12 days embryo spinal ganglion cDNA, RIKEN full-length enriched library, clone:D130045H18 product:unclassifiable	AK051389	1,51	3,39E-02	2,85
Aqxt	alanine-glyoxylate aminotransferase	NM_016702	1,54	8,28E-03	2,91
4921521F21Rik	RIKEN cDNA 4921521F21 gene	NM_027582	1,60	1,28E-02	3,04
Saa1	serum amyloid A 1	NM_009117	1,68	1,65E-02	3,20
Myh7	myosin, heavy polypeptide 7, cardiac muscle, beta	NM_080728	1,80	3,64E-02	3,49
Saa2	serum amyloid A 2	NM_011314	1,81	2,63E-04	3,50
ENSMUST00000094405	serum amyloid A, pseudogene [Source:MarkerSymbol;Acc:MG1:108518]		1,85	1,52E-02	3,61
Prox1	adult male hypothalamus cDNA, RIKEN full-length enriched library, clone:A230003G05 product:unclassifiable	AK038396	1,87	6,82E-03	3,65
NAP112201-1			2,07	2,62E-02	4,21
AK034051	adult male diencephalon cDNA, RIKEN full-length enriched library, clone:9330151L07 product:unclassifiable	AK034051	2,17	8,28E-03	4,49
Mup4	major urinary protein 4	NM_008648	2,18	6,54E-03	4,54
Arg1	arginase 1, liver	NM_007482	2,36	1,43E-02	5,14
Mup1	major urinary protein 1	NM_031188	2,39	1,15E-02	5,24
Hoxb8	homeo box B8	NM_010461	2,62	1,48E-04	6,17
1100001G20Rik	RIKEN cDNA 1100001G20 gene	NM_183249	2,66	2,59E-03	6,32
Hoxc8	homeo box C8	NM_010466	2,86	6,72E-04	7,27

logFC: log Fold-Change
adjpval: adjusted p-value

Supplemental Table III. Differentially expressed genes in TA compared with AA only in WT mice

Supplemental Table III: Differentially expressed genes in TA compared with AA only in WT mice			Wild-type		
GeneSymbol	Description	GenbankAcc	logFC	adjpval	fold-change
LOWER LEVELS					
Cxcl5	chemokine (C-X-C motif) ligand 5	NM_009141	-3.50	9.30E-04	0.09
Mmp12	matrix metalloproteinase 12	NM_008605	-2.49	1.66E-02	0.18
Prl4a1	prolactin-like protein A	NM_011165	-2.35	4.88E-05	0.20
Kl	klotho	NM_013823	-2.15	4.95E-02	0.22
AK039844	0 day neonate thymus cDNA, RIKEN full-length enriched library, clone:A430018I09 product:unclassifiable	AK039844	-1.90	2.67E-02	0.27
Odz2	odd Oz/ten-m homolog 2 (Drosophila), transcript variant 1	NM_011856	-1.76	2.86E-02	0.30
4833422F24Rik	RIKEN cDNA 4833422F24 gene	NM_029021	-1.60	1.71E-02	0.33
Sele	selectin, endothelial cell	NM_011345	-1.49	3.56E-02	0.36
Ttc9	tetratricopeptide repeat domain 9	NM_001033149	-1.07	1.24E-02	0.48
Ptgds	prostaglandin D2 synthase (brain)	NM_008963	-1.06	1.09E-02	0.48
HIGHER LEVELS					
Abca9	ATP-binding cassette transporter sub-family A member 9	NM_147220	1.00	3.51E-02	2.01
Asb4	ankyrin repeat and SOCS box-containing protein 4	NM_023048	1.03	5.00E-02	2.04
A630043P06	adult male bone cDNA, RIKEN full-length enriched library, clone:9830144B01 product:unclassifiable	AK162653	1.05	4.91E-02	2.07
1500035N22Rik	adult male cerebellum cDNA, RIKEN full-length enriched library, clone:1500035N22 product:hypothetical	AK005363	1.23	4.76E-02	2.34
AK085431	0 day neonate kidney cDNA, RIKEN full-length enriched library, clone:D630024M05 product:unclassifiable	AK085431	1.30	2.94E-02	2.46
2610005M20Rik	10 days embryo whole body cDNA, RIKEN full-length enriched library, clone:2610005M20 product:hypothetical protein	AK011326	1.48	9.30E-04	2.78
Rkhd3	PREDICTED: Mus musculus ring finger and KH domain containing 3	XM_620516	1.55	2.26E-02	2.93
Daam2	dishevelled associated activator of morphogenesis 2	NM_001008231	1.74	3.47E-02	3.33
Htr2b	5-hydroxytryptamine (serotonin) receptor 2B	NM_008311	1.75	2.26E-02	3.36
NAP059464-1			1.76	9.33E-03	3.39
AK043066	7 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:A730052E04	AK043066	1.99	4.13E-03	3.97
AK052051	12 days embryo eyeball cDNA, RIKEN full-length enriched library, clone:D230040A22 product:unclassifiable	AK052051	2.09	2.21E-02	4.24
Clca2	chloride channel calcium activated 2	NM_030601	2.20	1.24E-02	4.61
4933438K21Rik	adult male testis cDNA, RIKEN full-length enriched library, clone:4933438K21 product:weakly similar to ORF4 PROTEIN [Rattus norvegicus]	AK017111	2.28	7.11E-03	4.85
Clca1	chloride channel calcium activated 1	NM_009899	2.33	1.97E-02	5.04
Lrrc15	leucine rich repeat containing 15	NM_028973	2.60	3.47E-02	6.07
F830002L21Rik	activated spleen cDNA, RIKEN full-length enriched library, clone:F830002L21 product:unclassifiable	AK089577	3.11	2.56E-02	8.66

logFC: log Fold-Change
adjpval: adjusted p-value

Supplemental Table IV. Differentially expressed genes in TA compared with AA in both WT and apoE-KO mice

GeneSymbol	Description	GenbankAcc	Wild-type			apoE-KO		
			logFC	adjpval	fold-change	logFC	adjpval	fold-change
LOWER LEVELS								
AK034271	adult male diencephalon cDNA, RIKEN full-length enriched library, clone:9330171B01 product:similar to ORF4 PROTEIN [Rattus norvegicus]	AK034271	-5.15	1.13E-06	0.03	-5.58	4.87E-08	0.02
Msx2	homeo box, msh-like 2	NM_013601	-4.71	9.38E-07	0.04	-4.41	1.58E-07	0.05
Pde1c	adult male pituitary gland cDNA, RIKEN full-length enriched library, clone:5330411B21 product:phosphodiesterase 1C	AK030423	-3.77	7.62E-07	0.07	-4.15	1.87E-08	0.06
Fgf5	fibroblast growth factor 5	NM_010203	-4.13	4.63E-06	0.06	-4.10	6.51E-07	0.06
Hand2	heart and neural crest derivatives expressed transcript 2	NM_010402	-3.67	2.39E-05	0.08	-3.99	1.46E-06	0.06
Dlx2	distal-less homeobox 2	NM_010054	-3.85	4.13E-08	0.07	-3.77	3.07E-09	0.07
Grid2	10 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:6530411F08 product:glutamate	AK032669	-3.68	2.87E-06	0.08	-3.67	3.56E-07	0.08
9630021D06Rik	16 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:9630048E11	AK036246	-3.32	3.13E-07	0.10	-3.48	1.47E-08	0.09
1700084M14Rik	AGENCOURT_10729156 NIH MGC 169 cDNA clone IMAGE:6773641 5', mRNA sequence	CA465547	-1.84	2.96E-03	0.28	-3.35	1.79E-06	0.10
Fgf10	fibroblast growth factor 10	NM_008002	-2.87	4.24E-05	0.14	-3.32	1.06E-06	0.10
Adamdec1	ADAM-like, decysin 1	NM_021475	-3.61	4.96E-03	0.08	-3.19	1.99E-03	0.11
Foxq1	forkhead box G1	NM_008241	-3.25	9.91E-05	0.10	-3.16	1.45E-05	0.11
5033428I22Rik	11 days pregnant adult female ovary and uterus cDNA, RIKEN full-length enriched library, clone:5033428I22 product:unclassifiable	AK017203	-2.71	4.84E-05	0.15	-3.06	1.54E-06	0.12
Epvc	epiphyseal	NM_007884	-3.21	2.48E-04	0.11	-3.03	6.80E-05	0.12
Chgb	chromogranin B	NM_007694	-2.04	1.05E-02	0.24	-2.98	6.63E-05	0.13
Mab21l1	mab-21-like 1 (C. elegans)	NM_010750	-2.75	1.88E-05	0.15	-2.94	9.54E-07	0.13
Chrdl2	chordin-like 2	NM_133709	-2.80	2.20E-05	0.14	-2.93	1.29E-06	0.13
Pnoc	preproenkephalin	NM_010932	-2.14	1.28E-03	0.23	-2.88	1.17E-05	0.14
Cd207	CD 207 antigen	NM_144943	-3.82	4.50E-06	0.07	-2.68	1.17E-05	0.16
Dqkk	16 days embryo head cDNA, RIKEN full-length enriched library, clone:C130007D14 product:hypothetical	AK081332	-2.38	2.26E-04	0.19	-2.58	1.17E-05	0.17
Grem1	gremlin 1	NM_011824	-4.55	7.28E-05	0.04	-2.53	1.39E-03	0.17
Otor	otoraplin	NM_020595	-3.96	1.88E-04	0.06	-2.49	1.18E-03	0.18
Lrrtm3	leucine rich repeat transmembrane neuronal 3	NM_178678	-2.71	2.53E-04	0.15	-2.42	8.40E-05	0.19
Dlx1	distal-less homeobox 1	NM_010053	-2.50	1.30E-04	0.18	-2.36	2.34E-05	0.19
Lgi1	leucine-rich repeat Lgi family, member 1	NM_020278	-2.55	1.16E-05	0.17	-2.36	2.02E-06	0.19
Ren2	renin 2 tandem duplication of Ren1	NM_031193	-3.07	2.33E-06	0.12	-2.35	2.91E-06	0.20
Megf10	multiple EGF-like-domains 10	NM_001001979	-2.28	9.30E-04	0.21	-2.34	9.69E-05	0.20
AK085203	13 days embryo stomach cDNA, RIKEN full-length enriched library, clone:D530012B14 product:unclassifiable	AK085203	-2.39	1.02E-03	0.19	-2.30	1.81E-04	0.20
Nrg1	13 days embryo male testis cDNA, RIKEN full-length enriched library, clone:6030402G23	AK031289	-1.93	7.88E-04	0.26	-2.27	2.24E-05	0.21
Aox3	aldehyde oxidase 3	NM_023617	-2.40	2.51E-04	0.19	-2.25	5.32E-05	0.21
Nrg1	neuregulin 1	NM_178591	-1.74	7.02E-03	0.30	-2.23	1.26E-04	0.21
4930544G21Rik	RIKEN cDNA 4930544G21 gene	NM_172430	-1.89	3.44E-03	0.27	-2.23	1.20E-04	0.21
Stk32a	serine/threonine kinase 32A	NM_178749	-1.33	4.56E-03	0.40	-2.20	1.52E-04	0.22
Pde1c	phosphodiesterase 1C, transcript variant 1	NM_011054	-1.97	4.91E-03	0.26	-2.16	3.11E-04	0.22
1110017116Rik	RIKEN cDNA 1110017116 gene	NM_026754	-3.82	9.90E-04	0.07	-2.15	1.26E-02	0.22
Dlgap1	adult male diencephalon cDNA, RIKEN full-length enriched library, clone:9330164F04 product:inferred: RIKEN cDNA 4933422O14 gene	AK034215	-1.80	3.66E-04	0.29	-2.11	1.07E-05	0.23
Sdk2	mRNA for mKIAA1514 protein	AK129379	-1.40	1.53E-02	0.38	-2.11	8.33E-05	0.23
Tcf21	transcription factor 21	NM_011545	-1.90	1.90E-04	0.27	-2.09	9.40E-06	0.23
Stc2	stanniocalcin 2	NM_011491	-1.82	6.77E-05	0.28	-2.08	2.02E-06	0.24
Pdzrn4	PREDICTED: Mus musculus PDZ domain containing RING finger 4	XM_992218	-1.12	7.07E-03	0.46	-2.01	6.16E-06	0.25
Gdf6	growth differentiation factor 6	NM_013526	-1.78	3.37E-04	0.29	-1.98	1.47E-05	0.25
Irx1	Iroquois related homeobox 1 (Drosophila)	NM_010573	-2.11	4.63E-04	0.23	-1.97	1.07E-04	0.26
Tbx15	T-box 15	NM_009323	-1.78	1.14E-04	0.29	-1.95	3.65E-06	0.26
Bmp7	bone morphogenetic protein 7	NM_007557	-1.99	4.86E-05	0.25	-1.94	9.23E-06	0.26
Krt23	keratin 23	NM_033373	-2.28	1.02E-02	0.21	-1.93	5.87E-03	0.26
Tbx20	12 days embryo embryonic body between diaphragm region and neck cDNA, RIKEN full-length enriched library, clone:9430010M06 product:unclassifiable	AK020409	-1.47	8.10E-03	0.36	-1.85	1.74E-04	0.28
Nrg1	12 days embryo spinal ganglion cDNA, RIKEN full-length enriched library, clone:D130067D16 product:unclassifiable	AK083943	-1.33	4.80E-02	0.40	-1.83	8.34E-04	0.28
Ctnd2	catenin (cadherin associated protein), delta 2	NM_008729	-1.52	2.94E-02	0.35	-1.83	1.26E-03	0.28
Tbx20	T-box 20, transcript variant 1	NM_194263	-1.60	3.24E-04	0.33	-1.83	1.17E-05	0.28
Dlgap1	discs, large (Drosophila) homolog-associated protein 1, transcript variant 1	NM_177639	-1.45	7.43E-04	0.37	-1.82	1.17E-05	0.28
Ren1	renin 1 structural	NM_031192	-2.47	1.81E-04	0.18	-1.81	6.30E-04	0.28
Lgi1	16 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:9630013A09 product:hypothetical protein	AK035873	-1.93	2.04E-04	0.26	-1.79	4.33E-05	0.29
Aldh1a2	aldehyde dehydrogenase family 1, subfamily A2	NM_009022	-1.65	3.49E-03	0.32	-1.75	2.69E-04	0.30
Slc6a2	solute carrier family 6 (neurotransmitter transporter, noradrenalin), member 2	NM_009209	-1.81	1.08E-04	0.29	-1.71	2.01E-05	0.31
Kcnj10	potassium inwardly-rectifying channel, subfamily J, member 10	NM_001039484	-1.81	7.43E-04	0.29	-1.70	1.51E-04	0.31
Kif1a	mRNA for mKIAA102 protein	AK220487	-1.50	3.96E-04	0.35	-1.69	1.64E-05	0.31
Prkg2	protein kinase, cGMP-dependent, type II	NM_008926	-1.39	4.53E-02	0.38	-1.65	2.65E-03	0.32
Kcnj15	inward rectifier K+ channel Kir4.2 mRNA, complete cds	AF085696	-1.31	4.89E-04	0.40	-1.64	9.09E-06	0.32
Il13ra2	interleukin 13 receptor, alpha 2	NM_008356	-1.83	3.66E-04	0.28	-1.62	1.27E-04	0.32
P2ry14	purinergic receptor P2Y, G-protein coupled, 14, transcript variant 1	NM_133200	-1.54	3.03E-03	0.34	-1.62	2.51E-04	0.32
Lypd1	Ly6/Plaur domain containing 1	NM_145100	-1.31	7.43E-04	0.40	-1.62	1.38E-05	0.33
AK032581	adult male olfactory brain cDNA, RIKEN full-length enriched library, clone:6430603L18 product:unclassifiable	AK032581	-1.41	1.02E-03	0.38	-1.61	3.98E-05	0.33
Atp1b1	ATPase, Na+/K+ transporting, beta 1 polypeptide	NM_009721	-1.86	3.53E-05	0.28	-1.61	1.17E-05	0.33
Ahsq	alpha-2-HS-glycoprotein	NM_013465	-1.78	9.91E-05	0.29	-1.61	2.63E-05	0.33
A930011G23Rik	adult pancreas islet cells cDNA, RIKEN full-length enriched library, clone:C820017N15 product:hypothetical protein	AK050558	-2.13	1.91E-04	0.23	-1.60	2.51E-04	0.33
Brip1	BRCA1 interacting protein C-terminal helicase 1	NM_178309	-1.61	1.30E-04	0.33	-1.60	1.13E-05	0.33
Gria1	glutamate receptor, ionotropic, AMPA1 (alpha 1)	NM_008165	-1.25	5.52E-03	0.42	-1.58	1.22E-04	0.33
Tmem26	transmembrane protein 26	NM_177794	-1.60	3.09E-04	0.33	-1.58	3.98E-05	0.33
Dlx6s1	adult male hypothalamus cDNA, RIKEN full-length enriched library, clone:A230055N17 product:unclassifiable	AK038694	-1.35	2.66E-02	0.39	-1.55	1.48E-02	0.34
Slc38a4	solute carrier family 38, member 4	NM_027052	-1.59	6.28E-05	0.33	-1.53	1.00E-05	0.35
Gpr39	adult male testis cDNA, RIKEN full-length enriched library, clone:4933415E13 product:similar to PUTATIVE G PROTEIN-COUPLED RECEPTOR GPR39 [Homo sapiens]	AK016817	-1.32	1.36E-02	0.40	-1.51	7.82E-04	0.35
Sox9	SRY-box containing gene 9	NM_011448	-1.25	7.28E-03	0.42	-1.50	1.03E-02	0.35
2210407C18Rik	RIKEN cDNA 2210407C18 gene	NM_144544	-1.84	1.85E-04	0.28	-1.50	1.27E-04	0.35
Nlrp10	NLR family, pyrin domain containing 10	NM_175532	-1.87	1.01E-02	0.27	-1.50	7.90E-03	0.35
Ntn1	netrin G1	NM_030699	-1.57	6.56E-04	0.34	-1.49	1.27E-04	0.36
Clic6	chloride intracellular channel 6	NM_172469	-2.04	8.30E-05	0.24	-1.47	1.74E-04	0.36
Flrt3	fibronectin leucine rich transmembrane protein 3	NM_178382	-1.85	1.87E-03	0.28	-1.47	4.89E-04	0.36
Scube1	signal peptide, CUB domain, EGF-like 1	NM_022723	-1.31	2.51E-02	0.40	-1.44	2.18E-03	0.37
Trem14	triggering receptor expressed on myeloid cells-like 4, transcript variant 2	NM_172623	-1.71	1.20E-03	0.31	-1.42	7.95E-04	0.37
Ppyr1	pancreatic polypeptide receptor 1	NM_008919	-1.32	8.07E-04	0.40	-1.40	5.91E-05	0.38
Trim9	mRNA for mKIAA0282 protein	AK129109	-1.24	3.71E-02	0.42	-1.37	3.44E-03	0.39
ItgaX	integrin alpha X	NM_021334	-1.49	9.96E-03	0.36	-1.37	1.95E-03	0.39
2210010C04Rik	RIKEN cDNA 2210010C04 gene	NM_023333	-1.32	7.52E-04	0.40	-1.36	7.60E-05	0.39
BC064033	cDNA sequence BC064033	NM_173375	-1.42	3.49E-03	0.38	-1.34	7.56E-04	0.39
Mab21l2	mab-21-like 2 (C. elegans)	NM_011839	-2.54	6.28E-05	0.17	-1.33	1.88E-03	0.40
Cacna2i3	calcium channel, voltage-dependent, alpha2/delta subunit 3	NM_009785	-1.14	1.93E-03	0.45	-1.32	7.60E-05	0.40
D630004D15Rik	0 day neonate kidney cDNA, RIKEN full-length enriched library, clone:D630004D15 product:unclassifiable	AK052608	-0.99	3.03E-03	0.50	-1.31	3.42E-05	0.40
Efemp1	epidermal growth factor-containing fibulin-like extracellular matrix protein 1	NM_146015	-1.39	6.75E-04	0.38	-1.30	1.48E-04	0.41
Ephb1	Eph receptor B1	NM_173447	-1.00	4.51E-03	0.50	-1.28	7.51E-05	0.41
Robo1	roundabout homolog 1 (Drosophila)	NM_019413	-0.96	3.34E-03	0.51	-1.28	3.70E-05	0.41
Tmem16b	transmembrane protein 16B	NM_153589	-1.43	3.37E-04	0.37	-1.26	1.23E-04	0.42
Ntn1	9B665367 RIKEN full-length enriched, 0 day neonate eyeball Mus musculus cDNA clone E130203P04 5'	BB665367	-1.39	1.78E-03	0.38	-1.26	5.63E-04	0.42
4833415N18Rik	0 day neonate head cDNA, RIKEN full-length enriched library, clone:4833415N18 product:unclassifiable	AK014704	-1.46	7.43E-04	0.36	-1.26	3.22E-04	0.42
Fetub	fetuin beta, transcript variant 1	NM_021564	-1.56	3.88E-04	0.34	-1.26	2.93E-04	0.42
AW492586	UI-M-BH3-att-b-09-0-UI-s1 NIH BMAP M S4 Mus musculus cDNA clone UI-M-BH3-att-b-09-0-UI 3'	AW492586	-0.99	2.61E-02	0.50	-1.26	6.74E-04	0.42
Capn6	calpain 6	NM_007603	-0.84	4.35E-02	0.56	-1.24	3.66E-04	0.42
Akr1c19	aldo-keto reductase family 1, member C19	NM_001013785	-1.04	1.02E-02	0.49	-1.22	4.01E-04	0.43
Car8	carbonic anhydrase 8	NM_007592	-1.24	1.11E-03	0.42	-1.19	2.07E-04	0.44

Part1	activated spleen cDNA, RIKEN full-length enriched library, clone:F830043H10 product:unclassifiable	AK089884	-1.26	3.74E-02	0,42	-1,16	1.29E-02	0,45
Dpp4	dipeptidylpeptidase 4	NM 010074	-1.05	6.72E-03	0,48	-1,16	4.26E-04	0,45
Mmp13	matrix metalloproteinase 13	NM 008607	-1.54	2.43E-02	0,34	-1,16	2.83E-02	0,45
Cacna1d	calcium channel, voltage-dependent, L type, alpha 1D subunit, transcript variant 2	NM 001083616	-0.78	1.72E-02	0,58	-1,14	1.21E-04	0,45
Pkib	protein kinase inhibitor beta, cAMP dependent, testis specific, transcript variant 2	NM 001039050	-1.74	9.50E-03	0,30	-1,14	2.91E-02	0,45
Prokr1	prokinectin receptor 1	NM 021381	-1.18	4.45E-02	0,44	-1,13	1.17E-02	0,46
Adamts12	ADAMTS-like 2	NM 029981	-1.15	2.50E-02	0,45	-1,13	4.92E-03	0,46
Scin	scinderin	NM 009132	-1.17	6.85E-04	0,44	-1,13	1.23E-04	0,46
Adamts16	a disintegrin-like and metalloproteinase (repolysin type) with thrombospondin type 1 motif, 16	NM 172053	-0.96	2.01E-02	0,51	-1,12	9.99E-04	0,46
Neto1	neuropilin (NRP) and tolloid (TLL)-like 1	NM 144946	-1.28	9.32E-03	0,41	-1,12	4.16E-03	0,46
Sh2d1b1	SH2 domain protein 1B1	NM 012009	-1.75	1.31E-03	0,30	-1,10	7.61E-03	0,47
Adam23	a disintegrin and metalloproteinase domain 23	NM 011780	-1.29	1.68E-03	0,41	-1,09	2.47E-03	0,47
Msx1	mouse Hox-7 mRNA for homeobox protein, homolog of Drosophila Msh gene	X59251	-1.09	1.02E-02	0,47	-1,08	1.81E-03	0,47
LnX1	ligand of numb-protein X 1	NM 010727	-1.13	2.12E-03	0,46	-1,07	4.32E-04	0,48
Psd	pleckstrin and Sec7 domain containing	NM 028627	-0.69	3.60E-02	0,62	-1,07	1.88E-04	0,48
Lamc3	laminin gamma 3	NM 011836	-1.32	6.46E-03	0,40	-1,05	3.20E-03	0,48
2810003C17Rik	RIKEN cDNA 2810003C17 gene	NM 145144	-1.02	3.34E-03	0,49	-1,04	3.36E-04	0,49
Spint1	serine protease inhibitor, Kunitz type 1	NM 016907	-2.40	9.38E-03	0,19	-1,04	1.49E-02	0,49
Adra1b	adrenergic receptor, alpha 1b	NM 007416	-1.08	1.49E-03	0,47	-1,03	2.68E-04	0,49
EG434197	predicted gene, EG434197	NM 001013811	-1.02	6.87E-03	0,49	-1,03	9.65E-04	0,49
Igf2bp2	insulin-like growth factor binding protein 2	NM 008342	-1.15	1.78E-03	0,45	-1,02	6.74E-04	0,49
Gdpd2	glycerophosphodiester phosphodiesterase domain containing 2	NM 023608	-0.99	4.60E-02	0,50	-1,01	7.96E-03	0,50
Pla1a	phospholipase A1 member A	NM 134102	-1.15	7.28E-03	0,45	-1,01	3.10E-03	0,50
4933436C20Rik	adult male testis cDNA, RIKEN full-length enriched library, clone:4933436C20 product:hypothetical protein	AK017076	-1.14	3.61E-02	0,45	-0,99	1.78E-02	0,50
Amph	amphiphysin	NM 175007	-1.43	7.74E-03	0,37	-0,98	1.84E-02	0,51
Esrrg	estrogen-related receptor gamma	NM 011935	-1.06	4.44E-02	0,48	-0,95	1.84E-02	0,52
Sult1e1	sulfotransferase family 1E, member 1	NM 023135	-1.13	1.20E-02	0,46	-0,93	8.50E-03	0,52
Akr1c18	aldo-keto reductase family 1, member C18	NM 134066	-1.53	3.66E-04	0,35	-0,93	3.05E-03	0,53
E430002D04Rik	RIKEN cDNA E430002D04 gene	NM 172909	-1.69	6.07E-04	0,31	-0,91	1.13E-02	0,53
D230034L24Rik	12 days embryo eyeball cDNA, RIKEN full-length enriched library, clone:D230034L24 product:unclassifiable	AK084380	-1.33	6.96E-03	0,40	-0,89	1.90E-02	0,54
1190003J15Rik	RIKEN cDNA 1190003J15 gene	NM 029821	-1.23	2.94E-03	0,43	-0,88	5.69E-03	0,54
Cd72	CD72 antigen	NM 007654	-1.07	3.86E-02	0,48	-0,85	2.42E-02	0,55
Creg2	cellular repressor of E1A-stimulated genes 2	NM 170597	-1.20	4.13E-03	0,43	-0,82	1.12E-02	0,57
2010002N04Rik	RIKEN cDNA 2010002N04 gene	NM 134133	-1.01	1.12E-02	0,49	-0,74	1.78E-02	0,60
Sdk1	sidekick homolog 1 (chicken)	NM 177879	-1.04	1.02E-02	0,49	-0,67	3.29E-02	0,63
1700040L02Rik	RIKEN cDNA 1700040L02 gene	NM 028491	-1.05	8.59E-03	0,48	-0,62	4.79E-02	0,65
C1ql3	C1q-like 3	NM 153155	-1.02	3.13E-03	0,49	-0,59	2.33E-02	0,66
HIGHER LEVELS								
Mylk2	myosin, light polypeptide kinase 2, skeletal muscle	NM 001081044	1.03	4.49E-03	2,05	0,56	4.59E-02	1,48
Grm3	glutamate receptor, metabotropic 3	NM 181850	1.11	1.02E-02	2,16	0,79	1.80E-02	1,73
Ndh9	Norrie disease homolog	NM 010883	1.04	1.19E-02	2,06	0,81	1.26E-02	1,75
AK048779	0 day neonate cerebellum cDNA, RIKEN full-length enriched library, clone:C230063A09 product:unclassifiable	AK048779	1.03	4.13E-03	2,04	0,83	3.49E-03	1,77
Calcr1	calcitonin receptor-like	NM 018782	1.08	2.22E-03	2,12	0,84	1.77E-03	1,79
Hhip	Hedgehog-interacting protein	NM 020259	1.05	1.70E-02	2,06	0,93	6.96E-03	1,90
2310005C01Rik	adult male tongue cDNA, RIKEN full-length enriched library, clone:2310005C01 product:unclassifiable	AK009163	1.05	4.40E-02	2,06	0,95	1.67E-02	1,93
Lypd6	LY6/PLAUR domain containing 6	NM 177139	1.11	3.73E-02	2,15	0,96	1.78E-02	1,95
Angptl1	angiopoietin-like 1	NM 028333	0.71	4.35E-02	1,64	1,01	5.31E-04	2,02
Foxf2	forkhead box F2	NM 010225	1.02	1.94E-02	2,02	1,02	3.22E-03	2,02
Ptprr	protein tyrosine phosphatase, receptor type, R	NM 011217	0.86	2.75E-02	1,81	1,03	1.38E-03	2,04
Nostrin	nitric oxide synthase trafficker	NM 181547	1.19	2.49E-03	2,27	1,03	1.08E-03	2,05
Gpr97	G protein-coupled receptor 97	NM 173036	1.16	1.17E-02	2,23	1,04	2.67E-02	2,06
BC034076	cDNA sequence BC034076	NM 177649	1.08	3.64E-03	2,11	1,05	6.28E-04	2,06
Slc22a2	solute carrier family 22 (organic cation transporter), member 2	NM 013667	1.14	1.58E-03	2,20	1,07	3.43E-04	2,10
Foxd1	forkhead box D1	NM 008242	1.33	8.08E-03	2,52	1,10	5.45E-03	2,14
Hoxa6	homeo box A6	NM 010454	1.35	2.23E-03	2,55	1,10	1.73E-03	2,14
Mvbp2	myosin binding protein C, fast-type	NM 146189	0.93	2.58E-02	1,90	1,10	1.18E-03	2,15
D630042P16Rik	2 days pregnant adult female ovary cDNA, RIKEN full-length enriched library, clone:E330001L02 product:similar to FLS485 [Homo sapiens]	AK054244	1.13	0,0435	2,18	1,10	0,0156	2,15
Mup3	major urinary protein 3	NM 001039544	1.72	4.13E-03	3,29	1,11	1.56E-02	2,17
Lrrm1	leucine rich repeat protein 1, neuronal	NM 008516	1.44	9.90E-04	2,71	1,12	1.14E-03	2,17
Cpb1	carboxypeptidase B1 (tissue)	NM 029706	1.47	5.00E-05	2,76	1,12	6.32E-05	2,17
Zfx4	zinc finger homeodomain 4	NM 030708	1.17	1.23E-03	2,25	1,14	2.08E-04	2,20
Hfe2	hemochromatosis type 2 (juvenile) (human homolog)	NM 027126	0.97	2.52E-02	1,95	1,15	1.16E-03	2,22
BC015286	cDNA sequence BC015286	NM 198171	0.76	4.35E-02	1,69	1,16	2.80E-04	2,23
Irx2	Iroquois related homeobox 2 (Drosophila)	NM 010574	1.12	0,0025	2,17	1,16	0,0002	2,23
Hoxd4	homeo box D4	NM 010469	0.81	1.70E-02	1,75	1,17	1.27E-04	2,25
Chrna1	cholinergic receptor, nicotinic, alpha polypeptide 1 (muscle)	NM 007389	1.20	1.01E-03	2,30	1,20	1.59E-04	2,29
Col8a2	procollagen, type VIII, alpha 2	NM 199473	1.13	3.26E-03	2,19	1,20	2.47E-04	2,30
Nts	neurotensin	NM 024435	2.08	3.23E-04	4,23	1,24	3.01E-03	2,37
1600015H20Rik	RIKEN cDNA 1600015H20 gene	NM 024237	1.45	4.99E-04	2,73	1,25	2.28E-04	2,37
Tnc	tenascin C	NM 011607	1.50	0,0028	2,83	1,25	0,0015	2,38
Hoxd8	homeo box D8	NM 008276	1.29	1.09E-03	2,44	1,29	1.47E-04	2,44
Slc22a1	solute carrier family 22 (organic cation transporter), member 1	NM 009202	1.21	1.15E-03	2,32	1,31	8.33E-05	2,48
4921525H12Rik	12 days embryo eyeball cDNA, RIKEN full-length enriched library, clone:D230016J21 product:hypothetical	AK164420	1.28	2.59E-03	2,43	1,31	1.99E-04	2,48
ENSMUST0000070019	tenascin C [Source:MarkerSymbol;Acc:MG1:101922]		1,58	3.61E-03	2,98	1,32	2.13E-03	2,50
Tfr2	transferrin receptor 2	NM 015799	1.04	4.50E-02	2,06	1,34	1.38E-03	2,53
P2rx1	purinergic receptor P2X, ligand-gated ion channel, 1	NM 008771	1.30	1.03E-03	2,45	1,37	8.41E-05	2,58
Hoxa10	homeo box A10	NM 008263	0.94	6.69E-03	1,92	1,39	3.09E-05	2,62
D830007B15Rik	adult male testis cDNA, RIKEN full-length enriched library, clone:4932442L11 product:hypothetical protein	AK077061	1.13	1.98E-02	2,19	1,39	6.06E-04	2,63
Ptpn20	protein tyrosine phosphatase, non-receptor type 20	NM 008978	1.89	8.90E-03	3,72	1,40	1.31E-02	2,63
AK048907	0 day neonate cerebellum cDNA, RIKEN full-length enriched library, clone:C230080H17 product:unclassifiable	AK048907	1.52	1.78E-03	2,86	1,43	3.73E-04	2,69
AK036268	16 days neonate cerebellum cDNA, RIKEN full-length enriched library, clone:9630050J22	AK036268	1.28	1.86E-02	2,42	1,44	1.23E-03	2,71
AK048833	0 day neonate cerebellum cDNA, RIKEN full-length enriched library, clone:C230073O13 product:unclassifiable	AK048833	1.86	4.35E-02	3,64	1,45	4.03E-02	2,74
AK031717	13 days embryo male testis cDNA, RIKEN full-length enriched library, clone:6030496L02	AK031717	1.61	4.35E-02	3,05	1,45	1.68E-02	2,74
Pde6h	phosphodiesterase 6H, cGMP-specific, cone, gamma	NM 023898	1.36	1.29E-04	2,57	1,45	6.41E-06	2,74
Gria4	glutamate receptor, ionotropic, AMPA4 (alpha 4)	NM 019691	1.37	9.94E-03	2,59	1,47	1.80E-03	2,76
Pax1	paired box gene 1	NM 008780	1.63	4.04E-04	3,10	1,47	1.27E-04	2,77
Nkx3-1	NK-3 transcription factor, locus 1 (Drosophila)	NM 010921	2.26	1.29E-03	4,79	1,49	5.45E-03	2,80
Olf78	olfactory receptor 78	NM 130866	1.72	3.24E-02	3,30	1,51	1.50E-02	2,84
Adra2a	adrenergic receptor, alpha 2a	NM 007417	1.74	2.36E-04	3,35	1,51	4.94E-03	2,85
Rgs17	regulator of G-protein signaling 17	NM 019958	1.43	6.47E-03	2,70	1,51	5.81E-04	2,85
Reln	reelin	NM 011261	1.44	3.81E-03	2,71	1,54	2.74E-04	2,90
AK031091	13 days embryo forelimb cDNA, RIKEN full-length enriched library, clone:5930404A08 product:hypothetical protein	AK031091	1.70	9.61E-03	3,25	1,55	3.19E-03	2,92
Serpinb10	serine (or cysteine) peptidase inhibitor, clade B (ovalbumin), member 10	NM 198028	1.64	2.83E-02	3,12	1,56	7.36E-03	2,94
Sfrp4	secreted frizzled-related sequence protein 4	NM 016687	1.26	3.96E-03	2,39	1,56	8.41E-05	2,95
Fhod3	formin homology 2 domain containing 3	NM 175276	1.60	9.63E-05	3,03	1,57	1.25E-05	2,96
Al646519	BX521018 Soares, thymus, 2NbMT Mus musculus cDNA clone IMAGp998H103083 ; IMAGE:1226169, mRNA sequence	BX521018	2.13	1.49E-03	4,37	1,57	2.49E-03	2,98
Jam4	junction adhesion molecule 4	NM 028078	1.62	9.32E-03	3,07	1,59	1.69E-03	3,02
Nxph1	neurexophilin 1	NM 008751	1.56	8.94E-03	2,96	1,61	1.28E-03	3,04
Adamts19	a disintegrin-like and metalloproteinase (repolysin type) with thrombospondin type 1 motif, 19	NM 175506	1.65	3.36E-02	3,15	1,61	7.51E-03	3,06
Styk1	serine/threonine/tyrosine kinase 1	NM 172891	2.13	9.01E-03	4,36	1,64	9.69E-03	3,12
Avpr1a	arginine vasopressin receptor 1A	NM 016847	1.71	6.75E-05	3,26	1,67	9.67E-06	3,17
Esm1	endothelial cell-specific molecule 1	NM 023612	1.59	1.61E-03	3,01	1,68	1.35E-04	3,19
Hoxb6	homeo box B6</							

C1qtnf3	C1q and tumor necrosis factor related protein 3	NM_030888	2,29	6,81E-05	4,89	1,99	2,31E-05	3,97
Hoxd9	homeo box D9	NM_013555	1,84	2,43E-02	3,58	2,13	1,64E-03	4,38
Slc26a4	solute carrier family 26, member 4	NM_011867	2,30	8,32E-06	4,94	2,15	1,54E-06	4,44
Mmrn1	PREDICTED: Mus musculus multimerin 1	XM_284198	2,87	3,13E-03	7,29	2,20	3,65E-03	4,61
Mup5	major urinary protein 5	NM_008649	1,53	1,19E-02	2,89	2,22	8,40E-05	4,67
Hoxb7	homeo box B7	NM_010460	2,15	2,28E-05	4,43	2,22	1,54E-06	4,67
2610034M16Rik	RIKEN cDNA 2610034M16 gene	NM_027001	1,49	4,45E-02	2,80	2,24	3,25E-04	4,74
Serpinb2	serine (or cysteine) peptidase inhibitor, clade B, member 2	NM_011111	2,17	4,35E-02	4,50	2,26	6,41E-03	4,80
Hoxa7	homeo box A7	NM_010455	2,62	4,96E-05	6,13	2,55	6,98E-06	5,85
2700086A05Rik	2 days pregnant adult female oviduct cDNA, RIKEN full-length enriched library, clone:E230011F24 product:unclassifiable	AK053996	2,80	3,84E-06	6,97	2,60	8,76E-07	6,05
Hoxb9	homeo box B9	NM_008270	3,27	1,82E-05	9,68	3,17	5,41E-06	8,98
Hoxc6	mouse mRNA for HOX 3.3 PRII transcript	X16511	3,40	1,11E-06	10,58	3,30	1,49E-07	9,84
Hoxc9	homeo box C9	NM_008272	6,04	2,61E-10	65,74	5,93	2,72E-11	60,87

logFC: log Fold-Change

adjpval: adjusted p-value

Supplemental Table V. Functional classification of all the differentially expressed genes in Biological Processes Gene Ontology Terms (level 1)

Genes differentially expressed only in apoE-KO mice (Supplemental Table II)			
GOTERM_BP_1 Category*	Count	%	Benjamini
cellular process	50	46,729	0,899
multicellular organismal process	31	28,972	0,206
biological regulation	30	28,037	0,992
metabolic process	27	25,234	0,999
developmental process	25	23,364	0,054
localization	24	22,430	0,045
establishment of localization	23	21,495	0,107
response to stimulus	23	21,495	0,080
cellular component organization	11	10,280	0,867
biological adhesion	9	8,411	0,050
multi-organism process	4	3,738	0,615
immune system process	4	3,738	0,936
death	3	2,804	0,935
cellular component biogenesis	2	1,869	0,994
reproductive process	2	1,869	0,992
reproduction	2	1,869	0,989
locomotion	1	0,935	1,000
growth	1	0,935	1,000

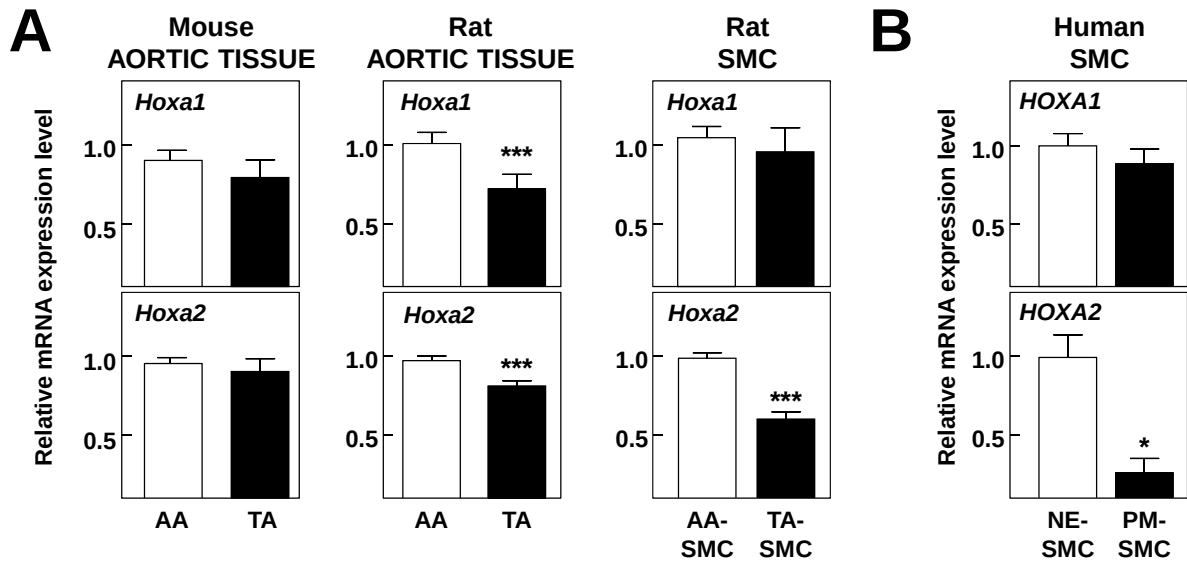
Genes differentially expressed only in WT mice (Supplemental Table III)			
GOTERM_BP_1 Category*	Count	%	Benjamini
cellular process	7	33,333	0,998
biological regulation	6	28,571	0,999
metabolic process	5	23,810	0,999
establishment of localization	4	19,048	0,999
localization	4	19,048	0,986
response to stimulus	3	14,286	0,995
developmental process	2	9,524	1,000
multicellular organismal process	1	4,762	1,000
rhythmic process	1	4,762	1,000
immune system process	1	4,762	1,000
death	1	4,762	1,000
locomotion	1	4,762	1,000
cellular component organization	1	4,762	1,000
biological adhesion	1	4,762	1,000

Genes differentially expressed in both WT and apoE-KO mice (Supplemental Table IV)			
GOTERM_BP_1 Category*	Count	%	Benjamini
cellular process	93	50,543	0,732
biological regulation	85	46,196	0,042
multicellular organismal process	78	42,391	0,000
metabolic process	62	33,696	0,970
developmental process	59	32,065	0,000
response to stimulus	28	15,217	0,539
localization	26	14,130	0,797
establishment of localization	25	13,587	0,691
cellular component organization	21	11,413	0,653
biological adhesion	13	7,065	0,049
reproductive process	9	4,891	0,645
reproduction	9	4,891	0,598
immune system process	7	3,804	0,877
locomotion	6	3,261	0,569
growth	5	2,717	0,405
multi-organism process	4	2,174	0,803
cellular component biogenesis	3	1,630	0,992
death	2	1,087	0,996
rhythmic process	1	0,543	1,000

*All categories, not only the statistically significant ones

Legend

GO:000003~reproduction
GO:002376~immune system process
GO:0008152~metabolic process
GO:0009987~cellular process
GO:0016043~cellular component organization
GO:0016265~death
GO:0022414~reproductive process
GO:0022610~biological adhesion
GO:0032501~multicellular organismal process
GO:0032502~developmental process
GO:0040007~growth
GO:0040011~locomotion
GO:0044085~cellular component biogenesis
GO:0048511~rhythmic process
GO:0050896~response to stimulus
GO:0051179~localization
GO:0051234~establishment of localization
GO:0051704~multi-organism process
GO:0065007~biological regulation



Supplemental Figure I. Homeobox A1 and A2 gene expression in aorta and SMCs. Quantitative real-time polymerase chain reaction analysis of homeobox transcripts in the indicated tissues and primary SMCs. Results are presented in arbitrary units normalized to AA, AA-SMCs or NE-SMCs. Data are means $\pm$ SEM of 4 independent extractions for mouse aortic tissue, 5-7 independent extractions for rat aortic tissue, 5 independent extractions for rat SMCs, and 3 independent experiments for NE- and PM-SMCs, measured in triplicate: *: $p < 0.05$; ***: $p < 0.001$.

