

Supplemental Table S1. Genes are regulated by I κ B α SR in PISA/ErbB2 transgenic mice treated with Ponasterone A or Placebo.

Symbol	Name	Fold
Apoptosis		
Fas	Fas (TNF receptor superfamily member)	2.15
Egln3	EGL nine homolog 3 (C. elegans)	2.12
Cell adhesion		
Dst	dystonin	3.99
Dsg2	desmoglein 2	2.21
Rap1gds1	RAP1, GTP-GDP dissociation stimulator 1	2.17
Pkp1	plakophilin 1	-4.39
Lamb3	laminin, beta 3	-5.57
Celsr1	cadherin EGF LAG seven-pass G-type receptor 1	4.40
Cell cycle		
Ccng1	cyclin G1	2.03
Cdc27	cell division cycle 27 homolog (S. cerevisiae)	2.06
Cgref1	cell growth regulator with EF hand domain 1	-2.03
Esco1	establishment of cohesion 1 homolog 1 (S. cerevisiae)	6.76
Esco2	establishment of cohesion 1 homolog 2 (S. cerevisiae)	2.71
Nipbl	Nipped-B homolog (Drosophila)	2.51
Rb1cc1	RB1-inducible coiled-coil 1	2.92
Rif1	Rap1 interacting factor 1 homolog (yeast)	3.80
Skp2	S-phase kinase-associated protein 2 (p45)	2.08
Smc4	structural maintenance of chromosomes 4	3.47
Chromosome organization and biogenesis		
Arid4b	AT rich interactive domain 4B (Rbp1 like)	2.46
Atrx	alpha thalassemia/mental retardation syndrome X-linked homolog (human)	2.47
Rif1	Rap1 interacting factor 1 homolog (yeast)	2.25
Smarca3	SWI/SNF related, matrix associated, actin dependent regulator of chromatin	2.22
Smc2	structural maintenance of chromosomes 2	2.41
Smc6	structural maintenance of chromosomes 6	2.41
Stag2	stromal antigen 2	2.27
Cytoskeleton organization		
Epb4.113	erythrocyte protein band 4.1-like 3	-2.29
Gsn	gelsolin	-2.39
Krt19	keratin 19	-5.22
Lcp1	lymphocyte cytosolic protein 1	2.13
Mid1	midline 1	8.77
Rock1	Rho-associated coiled-coil containing protein kinase 1	2.68

Sgcb

sarcoglycan, beta (dystrophin-associated glycoprotein)

2.54

Defense		
Ccdc18	coiled-coil domain containing 18	2.72
B2m	beta-2 microglobulin	2.21
H2-Ab1	histocompatibility 2, class II antigen A, beta 1	-3.03
DNA damage response		
Brcal	breast cancer 1	2.71
Brip1	BRCA1 interacting protein C-terminal helicase 1	2.16
Metabolism		
Acad9	acyl-Coenzyme A dehydrogenase family, member 9	-4.48
Adipoq	adiponectin, C1Q and collagen domain containing	-9.52
Amacr	alpha-methylacyl-CoA racemase	2.50
Car3	carbonic anhydrase 3	-32.08
Chpt1	choline phosphotransferase 1	3.26
Crot	carnitine O-octanoyltransferase	2.05
Glul	glutamate-ammonia ligase (glutamine synthetase)	-2.35
Gne	glucosamine	3.44
Lao1	L-amino acid oxidase 1	-5.82
Plcb4	phospholipase C, beta 4	3.40
Sod3	superoxide dismutase 3, extracellular	-2.41
Microtubule-based movement		
Cenpe	centromere protein E	2.63
Ktn1	kinectin 1	2.53
Mphosph1	M-phase phosphoprotein 1	3.12
Protein biosynthesis and folding		
Hspb1	heat shock protein 1	-2.11
Pcmt1	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain	2.07
Ppig	peptidyl-prolyl isomerase G (cyclophilin G)	2.31
Rpl17	ribosomal protein L17	3.79
Upf2	UPF2 regulator of nonsense transcripts homolog (yeast)	2.24
Proteolysis		
Cfd	complement factor D (adipsin)	-13.93
Cpd	carboxypeptidase D	2.55
Hp	haptoglobin	-5.50
Tfrc	transferrin receptor	2.07
Usp9x	ubiquitin specific peptidase 9, X chromosome	2.49

RNA processing

Pabpc1	poly A binding protein, cytoplasmic 1	2.14
Prpf40a	PRP40 pre-mRNA processing factor 40 homolog A (yeast)	2.06
Prpf4b	PRP4 pre-mRNA processing factor 4 homolog B (yeast)	2.59
Ssb	Sjogren syndrome antigen B	2.30

Signal transduction

Arhgap12	Rho GTPase activating protein 12	3.23
Arhgap29	Rho GTPase activating protein 29	2.91
Arhgap5	Rho GTPase activating protein 5	2.89
Cdc42ep5	CDC42 effector protein (Rho GTPase binding) 5	-2.03
Cmklr1	chemokine-like receptor 1	-3.47
Depdc1a	DEP domain containing 1a	2.38
Eif2ak2	eukaryotic translation initiation factor 2-alpha kinase 2	2.08
Erb2ip	Erb2 interacting protein	2.16
Gab2	growth factor receptor bound protein 2-associated protein 2	2.55
Ghr	growth hormone receptor	2.56
Lphn3	latrophilin 3	2.80
Mtmr6	myotubularin related protein 6	2.01
Narg1	NMDA receptor-regulated gene 1	2.13
Phip	pleckstrin homology domain interacting protein	2.15
Pik3c2a	phosphatidylinositol 3-kinase, C2 domain containing	2.20
Plek	pleckstrin	2.60
Rab27b	RAB27b, member RAS oncogene family	2.27
Rasa1	RAS p21 protein activator 1	2.02
Rgs5	regulator of G-protein signaling 5	3.75
Riok3	RIO kinase 3 (yeast)	3.89
Stk3	serine/threonine kinase 3 (Ste20, yeast homolog)	2.40
Utrn	utrophin	2.12
Vdr	vitamin D receptor	-2.76
Zfp292	zinc finger protein 292	2.06

Transcription

2610101J03Rik	RIKEN cDNA 2610101J03 gene	3.11
2810408B13Rik	RIKEN cDNA 2810408B13 gene	2.73
4921520G13Rik	RIKEN cDNA 4921520G13 gene	2.35
6330416L07Rik	RIKEN cDNA 6330416L07 gene	4.00
8430426H19Rik	RIKEN cDNA 8430426H19 gene	3.02
AI987944	expressed sequence AI987944	2.66
BC003267	cDNA sequence BC003267	2.41
BC049807	cDNA sequence BC049807	2.98
Cops2	COP9 (constitutive photomorphogenic) homolog, subunit 2	2.65
Dtx1	deltex 1 homolog (Drosophila)	2.47
Foxa1	forkhead box A1	-3.91
Hoxb2	homeo box B2	-3.72

Irx1	Iroquois related homeobox 1 (Drosophila)	-2.05
Lcorl	ligand dependent nuclear receptor corepressor-like	2.28
LOC434179	NA	2.92
MGC107415	NA	2.81
Mkx	mohawk	3.36
Nsbp1	nucleosome binding protein 1	2.76
Pou2af1	POU domain, class 2, associating factor 1	-4.96
Suz12	suppressor of zeste 12 homolog (Drosophila)	2.45
Tb11xr1	transducin (beta)-like 1X-linked receptor 1	-2.61
Tcf12	transcription factor 12	2.11
Tcf4	transcription factor 4	2.50
Thrap1	thyroid hormone receptor associated protein 1	2.01
Top2b	topoisomerase (DNA) II beta	3.09
Tsc22d3	TSC22 domain family 3	-2.59
Zbtb16	zinc finger and BTB domain containing 16	-6.10
Zfml	zinc finger, matrin-like	3.06
Zfp101	zinc finger protein 101	2.14
Zfp120	zinc finger protein 120	2.56
Zfp148	zinc finger protein 148	2.16
Zfp182	zinc finger protein 182	6.61
Zfp386	zinc finger protein 386 (Kruppel-like)	2.62
Zfp40	zinc finger protein 40	2.35
Zfp51	zinc finger protein 51	2.17
Zfp52	zinc finger protein 52	2.45
Zfp62	zinc finger protein 62	3.29
Zfp758	zinc finger protein 758	2.31

Transport

Abca1	ATP-binding cassette, sub-family A (ABC1), member 1	2.89
Acad9	acyl-Coenzyme A dehydrogenase family, member 9	-3.01
Apod	apolipoprotein D	-3.27
Atp1a1	ATPase, Na ⁺ /K ⁺ transporting, alpha 1 polypeptide	2.02
Cplx2	complexin 2	-2.04
Csn1s1	casein alpha s1	-7.99
Csn1s2a	casein alpha s2-like A	-11.72
Csn2	casein beta	-26.78
Cyp51	cytochrome P450, family 51	3.18
Fmo1	flavin containing monooxygenase 1	-3.52
Fxyd6	FXFD domain-containing ion transport regulator 6	-2.60
Kcnq1	potassium voltage-gated channel, subfamily Q, member 1	5.38
Kif18a	kinesin family member 18A	2.34
Kif5b	kinesin family member 5B	14.39
Maob	monoamine oxidase B	-2.70
Mup1	major urinary protein 1	-15.11
Rabep1	rabaptin, RAB GTPase binding effector protein 1	2.66

Scn4b	sodium channel, type IV, beta	-3.36
Slc18a2	solute carrier family 18 (vesicular monoamine), member 2	2.55
Slc28a3	solute carrier family 28 (sodium-coupled nucleoside transporter)	-7.58
Slc39a4	solute carrier family 39 (zinc transporter), member 4	-2.12
Slc5a8	solute carrier family 5 (iodide transporter), member 8	2.18
Slc6a14	solute carrier family 6 (neurotransmitter transporter)	2.21
Slc7a5	solute carrier family 7	-2.44
Sybl1	synaptobrevin like 1	2.38
Tfrc	transferrin receptor	2.35
Trpm7	transient receptor potential cation channel, subfamily M, member 7	2.28
Vamp1	vesicle-associated membrane protein 1	2.61
Ubiquitin cycle		
Fbxl21	F-box and leucine-rich repeat protein 21	2.18
Fbxo2	F-box only protein 2	-2.52
Herc5	hect domain and RLD 5	2.36
Usp14	ubiquitin specific peptidase 14	2.45
Others		
Fxr1h	fragile X mental retardation gene 1, autosomal homolog	2.76
Orc4l	origin recognition complex, subunit 4-like (<i>S. cerevisiae</i>)	2.06
Rnf128	ring finger protein 128	2.15
Ttc7	tetratricopeptide repeat domain 7	2.21

Supplemental Table S2. Genes related to angiogenesis regulated by I κ B α SR in

PISA/ErbB2 transgenic mice.

Symbol	Name	Fold	Angiogenesis
Specific Promoters & Inhibitors:			
AMOT	Angiomotin	-1.3	P
ANGPT1	Angiopoietin 1	-1.79	P
ANGPT2	Angiopoietin 2	1.85	I
Growth Factors & Receptors:			
EFNA2	Ephrin A2	-1.59	P
EFNA5	Ephrin A2	1.73	P
EFNB2	Ephrin B2	1.4	P
Fibroblast Growth Factor & Receptor:			
FGF7	Fibroblast growth factor 7	1.69	P
FGFR1	Fibroblast growth factor receptor 1	-1.57	P
FGFR3	Fibroblast growth factor receptor 3	-1.31	P
Platelet-derived Growth Factor & Receptors:			
PDGFA	Platelet derived growth factor alpha	1.38	P
PDGFRA	Platelet derived growth factor receptor alpha	-1.51	P
Transforming Growth Factor & Receptors:			
TGFA	Transforming growth factor alpha	-1.64	P
TGFB2	Transforming growth factor beta 2	1.84	P
TGFB3	Transforming growth factor beta 3	1.69	P
TGFBR1	Transforming growth factor beta receptor I	1.54	P
TGFBR2	Transforming growth factor receptor II	1.43	P
Vascular Endothelial Growth Factors & Receptors:			
FIGF	c-fos induced growth factor	-1.44	P
PGF	Placental growth factor	1.36	N/A
VEGFC	Vascular endothelial growth factor alpha	-1.98	P
EGF	Epidermal growth factor	-1.63	P
GRO1	Chemokine ligand 1	-1.73	P
HGF	Hepatocyte growth factor	-1.37	P
IGF1	Insulin-like growth factor 1	-1.39	P
Cytokines & Chemokines:			
CSF	Colony stimulating factor 3	-1.33	P
NRP1	Neuropilin 1	1.34	P
PTN	Pleiotrophin	-1.31	P
TRAC	T-cell RING protein in activation 1	-1.56	P

Matrix Proteins Protease & Inhibitors:

MMP2	Matrix metalloproteinase 2	-2.35	P
MMP3	Matrix metalloproteinase 3	-2.21	P
MSR1	Macrophage scavenger receptor 1	1.31	P
TBHS3	Thrombospondin 3	-1.54	P
TIMP1	Tissue inhibitor of metalloproteinase 1	-2.0	P
TIMP2	Tissue inhibitor of metalloproteinase 2	-1.27	P

Transcription Factors:

HIF1A	Hypoxia inducible factor	1.4	P
ID1	Inhibitor of DNA binding 1	-1.56	P

Other Related Genes:

ENG	Endoglin	-1.31	P
PTGS1	Prostaglandin-endoperoxide synthase 1	-1.58	P
RSN	Restin	1.39	I
SPP1	Secreted phosphoprotein 1	-1.49	P

P: Promote Angiogenesis. I: Inhibit Angiogenesis