

ON-LINE SUPPLEMENTARY TABLE

Table 3. Differentially Expressed Probe Sets in Muscle Tissue of GK Rats.

A. Immune/Inflammatory (45 probe sets, 43 genes)						
Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1368128_at	phospholipase A2, group IIA	<i>Pla2g2a</i>	NM_031598	mediator of the inflammatory process
5	WKY	1368593_at	CD1d1 antigen	<i>Cd1; Cd1d</i>	NM_017079	presentation of lipid antigens to T cells
5	WKY	1370382_at	major histocompatibility antigen	<i>Mhc</i>	BI279526	antigen processing and presentation
5	WKY	1371033_at	major histocompatibility antigen	<i>Mhc</i>	A1715202	antigen processing and presentation
5	WKY	1383449_at	major histocompatibility antigen	<i>Mhc</i>	AA801218	antigen processing and presentation
5	WKY	1388071_x_at	major histocompatibility antigen	<i>Mhc</i>	M24024	antigen processing and presentation
5	WKY	1388202_at	major histocompatibility antigen	<i>Mhc</i>	BI395698	antigen processing and presentation
5	WKY	1389734_x_at	major histocompatibility antigen	<i>Mhc</i>	BI282965	antigen processing and presentation
5	WKY	1393108_at	major histocompatibility antigen	<i>Mhc</i>	BM387813	antigen processing and presentation
5	WKY	1394846_at	paired-Ig-like receptor A2	<i>Pira2</i>	AI237640	immune regulator
5	WKY	1399073_at	OTU domain, ubiquitin aldehyde binding 1	<i>Otub1</i>	BI274378	immune response and ubiquitin cycle
4	WKY	1369577_at	suppressor of cytokine signaling 2	<i>Socs2</i>	NM_058208	negative regulation of cytokine signal transduction
4	WKY	1370428_x_at	major histocompatibility antigen	<i>Mhc</i>	AJ249701	antigen processing and presentation
4	WKY	1371209_at	major histocompatibility antigen	<i>Mhc</i>	AJ243338	antigen processing and presentation
4	WKY	1391463_at	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	<i>Ddx58</i>	AI575264	innate immune defense against viruses
3	WKY	1373889_at	immunoglobulin superfamily, member 7	<i>Igsf7</i>	BF387360	cell signaling and immune regulation
3	WKY	1384345_at	prostaglandin reductase 2	<i>Ptgr2</i>	AW527197	inflammation repression
3	WKY	1387839_at	major histocompatibility antigen	<i>Mhc</i>	NM_012646	antigen processing and presentation
3	WKY	1388102_at	prostaglandin reductase 1	<i>Ptgr1</i>	U66322	inflammation repression
3	WKY	1388255_x_at	major histocompatibility antigen	<i>Mhc</i>	AJ243338	antigen processing and presentation
3	WKY	1389651_at	apelin, AGTRL1 ligand	<i>Apln</i>	AI177057	inhibitory activity on HIV infection
3	WKY	1392172_at	chemokine (C-C motif) ligand 9	<i>Ccl9</i>	AI169984	activator of osteoclasts
3	WKY	1395981_at	activating signal cointegrator 1 complex subunit 3	<i>Ascc3</i>	AW919934	NF-kappa-B, SRF and AP1 transactivation
5	GK	1369110_x_at	major histocompatibility antigen	<i>Mhc</i>	NM_012645	antigen processing and presentation
5	GK	1369836_at	interferon-induced protein with tetratricopeptide repeats 1	<i>Ifft1</i>	NM_020096	immune response
5	GK	1370463_x_at	major histocompatibility antigen	<i>Mhc</i>	U50449	antigen processing and presentation
5	GK	1377334_at	major histocompatibility antigen	<i>Mhc</i>	BG378249	antigen processing and presentation
5	GK	1377950_at	interferon-inducible GTPase	<i>Iigp1</i>	AA955213	cell-autonomous immunity
5	GK	1379818_at	major histocompatibility antigen	<i>Mhc</i>	BF288109	antigen processing and presentation
5	GK	1392308_at	phospholipase A2, group IID	<i>Pla2g2d</i>	AI044869	inflammatory response; lipid catabolism
5	GK	*1394264_at	N-acetylglucosamine 6-O-sulfotransferase	<i>Chst5</i>	BF558607	biosynthesis of L-selectin ligands
5	GK	1396714_at	phospholipase A2, activating protein	<i>Plaa</i>	BF394289	regulation of specific inflammatory disease processes
5	GK	1369716_s_at	lectin, galactose binding, soluble 5	<i>Lgals5</i>	NM_012976	signal transducer; induces Th1 death
5	GK	1379499_at	lymphotoxin B	<i>Ltb</i>	BF282228	lymphotoxin signaling; immune response regulation
4	GK	1387366_at	interleukin enhancer binding factor 3	<i>Ilf3</i>	NM_053412	post-transcriptional regulation
4	GK	1390562_s_at	major histocompatibility antigen	<i>Mhc</i>	BE102350	antigen processing and presentation
4	GK	*1392444_at	N-acetylglucosamine 6-O-sulfotransferase	<i>Chst5</i>	AW531000	biosynthesis of L-selectin ligands
3	GK	1368983_at	heparin-binding EGF-like growth factor	<i>Hbegf</i>	NM_012945	macrophage-mediated cellular proliferation
3	GK	1369522_a_at	CD244 molecule, natural killer cell receptor 2B4	<i>Cd244</i>	NM_022259	leukocyte & natural killer cell activation
3	GK	1371213_at	major histocompatibility antigen	<i>Mhc</i>	AJ005023	antigen processing and presentation
3	GK	*1378163_at	gremlin 2 homolog, cysteine knot superfamily	<i>Grem2</i>	AA817956	cytokine activity
3	GK	*1380799_at	gremlin 2 homolog, cysteine knot superfamily (<i>Xenopus laevis</i>)	<i>Grem2</i>	BF388208	cytokine activity
3	GK	1384888_at	suppressor of cytokine signaling 7	<i>Socs7</i>	AI547911	negative regulation of cytokine signal transduction
3	GK	1385439_x_at	DEXH (Asp-Glu-X-His) box polypeptide 58	<i>Dhx58</i>	BF417541	negative regulator of host innate immune defense
3	GK	1379965_at	protein kinase C, epsilon	<i>Prkce</i>	BE113082	lipopolysaccharide mediated signaling
B. Energy Metabolism (17 probe sets, 16 genes)						
Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1369663_at	epoxide hydrolase 2, cytoplasmic	<i>Ephx2</i>	NM_022936	eicosanoid breakdown
5	WKY	1371137_at	acyl-coenzyme A oxidase 2, branched chain	<i>Acox2</i>	X95189	peroxisome beta oxidation of lipids
5	WKY	1379306_at	mitochondrial ribosomal protein L48	<i>MrpL48</i>	BE111794	structure constituents of mitochondria ribosomes
4	WKY	1368335_at	apolipoprotein A-I	<i>ApoA-I</i>	NM_012738	cholesterol efflux
4	WKY	1370355_at	stearyl-Coenzyme A desaturase 1	<i>Scd1</i>	J02585	fatty acid metabolism
3	WKY	1369727_at	apolipoprotein A-II	<i>ApoA-II</i>	NM_013112	HDL metabolism
3	WKY	1379744_at	serum amyloid A 4	<i>Saa4</i>	AI137930	apolipoprotein of the HDL complex
3	WKY	1393139_at	apolipoprotein C2	<i>ApoC-II</i>	BM385272	activator of triacylglycerol lipases
5	GK	1388603_a_at	iron-sulfur cluster assembly 1 homolog (<i>S. cerevisiae</i>)	<i>Isca1</i>	BM384289	assembly of mitochondrial iron-sulfur proteins; biogenesis of iron-sulfur clusters
5	GK	1388654_at	mitochondrial ribosomal protein L52	<i>MrpL52</i>	AI409180	structure constituents of mitochondria ribosomes
5	GK	1393421_at	peroxisomal membrane protein 4	<i>Pxmp4</i>	BG664011	fatty acid transporter; peroxisomal synthesis
4	GK	*1369502_a_at	amylase 1, salivary	<i>Amy1a</i>	NM_031502	carbohydrate metabolism

Table 3. Cont'd.

B. Energy Metabolism (17 probe sets, 16 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
4	GK	*1370359_at	amylase 1, salivary	<i>Amy1a</i>	AB057450	carbohydrate metabolism
4	GK	1374698_at	cytochrome c oxidase polypeptide VIIa	<i>Cox7a1</i>	AI709531	mitochondrial respiratory chain
4	GK	1382462_at	L-2-hydroxyglutarate dehydrogenase	<i>L2hgdh</i>	BF290937	mitochondrial; oxidoreductase activity
4	GK	1389142_at	sulfide:quinone oxidoreductase	<i>Sqrll</i>	AI013361	mitochondrial; oxidoreductase activity
3	GK	1390789_at	acyl-coenzyme A dehydrogenase family, member 11	<i>Acad11</i>	BI296347	mitochondrial; oxidoreductase activity

C. Transcription/Translation (48 probe sets, 46 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1370224_at	signal transducer and activator of transcription 3	<i>Stat3</i>	BE113920	transcription factor; Jak/STAT3 pathway
5	WKY	1375664_at	trinucleotide repeat containing 6	<i>Tnrc6</i>	BI294732	gene silencing
5	WKY	1379249_at	Wilms tumor 1-associating protein	<i>Wtap</i>	AA900400	transcriptional regulation; Wnt signaling
5	WKY	1382291_at	SRY sex determining region Y-box 9 protein	<i>Sox9</i>	AI454332	transcriptional regulation; normal skeletal development
5	WKY	1385871_at	DEAH (Asp-Glu-Ala-His) box polypeptide 36	<i>Dhx36</i>	AA859982	mRNA degradation and deadenylation
5	WKY	1385892_at	host cell factor 2	<i>HCFC2</i>	AA900322	RNA polymerase II promoter transcriptional regulation
4	WKY	1379615_at	kelch domain containing 5	<i>Klhdc5</i>	AI011501	transcriptional regulation; repression; BTB/POZ domain
4	WKY	1379735_at	TAF7 RNA polymerase II, TBP-associated factor, 55kDa	<i>Taf7</i>	AA850836	component of TFIID
4	WKY	1380651_at	ring finger protein (C3H2C3 type) 6	<i>Rnf6</i>	BI296352	DNA-dependent transcriptional regulation
4	WKY	1380948_at	myocyte enhancer factor 2C	<i>Mef2c</i>	BF414312	interaction with MyoD family of transcriptional activators
4	WKY	1381386_at	ring finger protein 10	<i>Rnf10</i>	AI407297	transcription factor
4	WKY	1381445_at	estrogen-related receptor gamma	<i>Esrrg</i>	AA996810	Orphan receptor; transcription activator
4	WKY	1387060_at	Kruppel-like factor 6	<i>Klf6</i>	NM_031642	Transcriptional activator; binds a GC box motif
4	WKY	1387795_at	polymerase (DNA directed), alpha 2	<i>Pola2</i>	NM_053480	early stage of chromosomal DNA replication
4	WKY	1393259_at	avian musculoaponeurotic fibrosarcoma (v-maf)	<i>Maf</i>	AI044342	transcriptional regulation of amino acid metabolism
3	WKY	1382205_at	Zic family member 1	<i>Zic1</i>	AW527509	transcription factor
3	WKY	1382308_at	ring finger and CCCH-type zinc finger domains 2	<i>Rc3h2</i>	AI717668	transcription factor
3	WKY	*1382524_at	zinc finger and BTB domain containing 20	<i>Zbtb20</i>	AA850361	transcription factor
3	WKY	*1393585_at	zinc finger and BTB domain containing 20	<i>Zbtb20</i>	AI145951	transcription factor
3	WKY	1384272_at	zinc finger protein 365	<i>Zfp365</i>	BG378837	transcription factor
3	WKY	1384794_at	glucocorticoid modulatory element binding protein 1	<i>Gmeb1</i>	BE106136	transcription regulation by glucocorticoids
3	WKY	1390813_at	RNA-binding protein Musashi-2	<i>Msi2</i>	AI236624	RNA binding; translational regulation
3	WKY	1394620_at	metallothionein-1 pseudogene a	<i>MT-1-pseudo-a</i>	BI288579	transcriptional regulation by heavy metals and glucocorticoids
5	GK	1380094_a_at	zinc finger protein 212	<i>Zfp212</i>	AI178375	transcription factor
5	GK	1381414_at	zinc finger protein 26	<i>Zfp26</i>	AA964872	transcription factor
5	GK	1383577_at	RAB, member of RAS oncogene family-like 3	<i>Rab13</i>	AA859277	transcriptional regulation; Ras signaling
5	GK	1386621_at	nuclear fragile X mental retardation interacting protein 2	<i>Nufip2</i>	AW142419	RNA binding; cell cycle modulated
5	GK	1390979_at	mouse zinc finger protein 14-like	<i>Zfp14</i>	AI409884	transcription factor
5	GK	*1383108_at	TAF13 RNA polymerase II, TBP-associated factor	<i>Taf13</i>	BE120513	transcription factor
4	GK	*1374177_at	TAF13 RNA polymerase II, TBP-associated factor	<i>Taf13</i>	AI230912	transcription factor
4	GK	1382648_at	glutamyl-prolyl-tRNA synthetase	<i>Eprs</i>	AI235566	aminoacylation of glutamic acid and proline tRNA
4	GK	1391600_at	MAX gene associated	<i>Mga</i>	BE118049	transcription factor
4	GK	1392598_at	DnaJ (Hsp40) homolog, subfamily B, member 6	<i>Dnajb6</i>	AA899326	molecular chaperone
4	GK	1395523_at	RNA binding motif protein, X-linked	<i>RbmX</i>	AW523475	RNA-binding; pre-mRNA splicing
4	GK	1396743_at	heterogeneous nuclear ribonucleoprotein D (AU-rich element RNA bp 1, 37kDa)	<i>Hnrmpd</i>	BF391580	transcription factor; telomere elongation
3	GK	1368321_at	early growth response 1	<i>Egr1</i>	NM_012551	transcription factor
3	GK	1373759_at	FBJ murine osteosarcoma viral oncogene homolog B	<i>FosB</i>	BF522317	transcription factor complex AP-1 formation
3	GK	1375043_at	FBJ osteosarcoma oncogene	<i>Fos</i>	BF415939	transcription factor complex AP-1 formation
3	GK	1373786_at	zinc finger protein 703	<i>Zfp703</i>	AA924756	transcriptional repressor
3	GK	1375655_at	cAMP responsive element binding protein 1	<i>Creb1</i>	BE107208	transcription factor
3	GK	1379346_at	cell division cycle 73, Paf1/RNA polymerase II complex component, homolog (S. cerevisiae)	<i>Cdc73</i>	BI290578	transcriptional and post-transcriptional regulation; cell cycle
3	GK	1382368_at	TROVE domain family, member 2	<i>Trove2</i>	AA943075	RNA-binding; RNA stabilization
3	GK	1387870_at	zinc finger protein 36	<i>Zfp36</i>	AB025017	transcription factor
3	GK	1392283_at	sal-like 4	<i>Sall4</i>	BI288834	transcription factor
3	GK	1392392_at	nuclear receptor co-repressor 1	<i>Ncor1</i>	AI012510	activating subunit for histone deacetylase 3
3	GK	1392631_at	Sp1 transcription factor	<i>Sp1</i>	AA900254	transcription factor
3	GK	1393718_at	ligand dependent nuclear receptor corepressor	<i>Lcor</i>	BE117189	transcriptional corepressor
3	GK	1393075_at	LON peptidase N-terminal domain and ring finger 3	<i>Lonrf3</i>	BF386199	Transcription factor

D. Signal Transduction (28 probe sets, 28 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1370114_a_at	phosphatidylinositol 3-kinase, regulatory, polypeptide 1	<i>Pik3a</i>	D64048	insulin signaling
5	WKY	1371960_at	YTH domain family 2	<i>Ythdf2</i>	AI230548	insulin/insulin like growth factor signaling
5	WKY	1395073_at	ecotropic viral integration site 1	<i>Evi1</i>	BI288681	inhibitor of c-jun N-terminal kinase; stimulator of PI3K/AKT signalling.
4	WKY	1387348_at	insulin-like growth factor binding protein 5	<i>Igf-bp5</i>	BE1132270	insulin growth factor signaling
4	WKY	1395020_at	pleckstrin homology domain containing, family H (with MyTH4 domain) member 1	<i>Plekhh1</i>	BI275435	domain present in many signaling proteins

Table 3. Cont'd.

D. Signal Transduction (28 probe sets, 28 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
3	WKY	1368872_a_at	homer homolog 2	<i>Vesl-2</i>	NM_053309	scaffolding protein
3	WKY	1369097_s_at	guanylate cyclase 1, soluble, beta 3	<i>Gucy1b3</i>	NM_012769	conversion of GTP to the second messenger cGMP
3	WKY	1372628_at	adaptor-related protein complex AP-4, sigma 1	<i>Ap4s1</i>	AA800277	protein targeting to endosome-lysosome
3	WKY	1372993_at	insulin-like growth factor 2 receptor	<i>Lgf2r</i>	BI299621	protein targeting to lysosome
3	WKY	1385275_at	wingless-related MMTV integration site 16	<i>Wnt16</i>	BF391286	Wnt signaling
3	WKY	1389093_at	p21 (CDKN1A)-activated kinase 1	<i>Pak1</i>	BI281735	activation of Rho-related GTPases; microtubule biogenesis
3	WKY	1395337_at	tight junction protein 1	<i>Tjp1</i>	AW141192	signal transduction; tight junction assembly
3	WKY	1398288_at	angiotensin II receptor, type 2	<i>Agtr2</i>	BF552873	angiotensin II receptor; cell proliferation
5	GK	1368690_a_at	glutamate receptor, metabotropic 4	<i>Grm4</i>	U47331	glutamate receptor
5	GK	1392382_at	transforming growth factor, beta 2	<i>Tgfb2</i>	BE117736	suppressor of interleukin-2 dependent T-cell growth; cytosolic calcium signal
5	GK	1392767_at	TBC1 domain family, member 20	<i>Tbc1d20</i>	AI502349	GTPase-activating protein for Rab family protein
4	GK	1373582_at	CAP-GLY domain containing linker protein 3	<i>Clp3</i>	BF418394	Akt signaling; cellular compartmentalization
4	GK	1384143_at	cingulin	<i>Cgn</i>	BE114778	tight junction formation
3	GK	1368064_a_at	dopa decarboxylase	<i>Ddc</i>	U31884	catecholamine synthesis
3	GK	1369050_at	phosphatidylinositol 3-kinase, C2 domain containing, gamma polypeptide	<i>Pik3c2g</i>	NM_053923	insulin signaling
3	GK	1370047_at	ectonucleotide pyrophosphatase/phosphodiesterase 1	<i>Enpp1</i>	NM_053535	insulin signaling
3	GK	1378871_at	brain-specific angiogenesis inhibitor 2	<i>Bai2</i>	AA924656	angiogenesis inhibition
3	GK	1379433_at	phosphatidylinositol 3-kinase, C2 domain containing, alpha polypeptide	<i>Pik3c2a</i>	AI059449	insulin signaling
3	GK	1382774_at	frequently rearranged in advanced T-cell lymphomas	<i>Frat1</i>	AA997070	positive regulation of the Wnt signaling pathway
3	GK	1383644_at	natriuretic peptide receptor C/guanylate cyclase C	<i>Npr3</i>	BM385202	Receptor for natriuretic peptide hormones
3	GK	1385014_at	nudix (nucleoside diphosphate linked moiety X)-type motif 10	<i>Nudt10</i>	BG377996	phosphohydrolases targeted diphosphoinositol polyphosphates
3	GK	1389409_at	testis derived transcript (3 LIM domains)	<i>Tes</i>	AI177869	Lim domains; protein interactions in signaling
3	GK	1397745_at	mindbomb homolog 1	<i>Mib1</i>	BF414336	Notch signaling

E. Small Molecule Metabolism (11 probe sets, 10 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1370902_at	aldo-keto reductase family 1, member B8	<i>Akr1b8</i>	AI233740	detoxification of xenobiotics
5	WKY	1389369_at	superoxide dismutase 2, mitochondrial	<i>Sod2</i>	BF289017	oxidative radical detoxification
4	WKY	*1387296_at	cytochrome P450, family 2, subfamily J, polypeptide 4	<i>Cyp2J4</i>	NM_023025	arachidonic acid metabolism
4	WKY	*1396327_at	cytochrome P450, family 2, subfamily J, polypeptide 4	<i>Cyp2J4</i>	BG374493	arachidonic acid metabolism
3	WKY	1392539_at	biliverdin reductase B (flavin reductase (NADPH))	<i>Blvrb</i>	AI009013	antioxidation; heme metabolism
5	GK	1375909_at	glutathione S-transferase, mu-4	<i>Gstm4</i>	BI285792	oxidative stress; xenobiotic degradation
5	GK	1395190_at	aldo-keto reductase family 1, member B10	<i>Akr1b10</i>	AI408099	aliphatic and aromatic aldehyde detoxification
4	GK	1368826_at	catechol-O-methyltransferase	<i>Comt</i>	NM_012531	catecholamines and catechol estrogen metabolism
4	GK	1394839_at	phosphoribosylglycinamide formyltransferase	<i>Gart</i>	AA850773	de novo purine biosynthesis
3	GK	1380432_at	cytidine monophospho-N-acetylneuraminic acid hydroxylase	<i>Cmah</i>	AI014030	glycoprotein metabolism
3	GK	1390777_at	sterol-C5-desaturase	<i>Sc5dL</i>	AI710051	cholesterol biosynthesis

F. Transport (18 probe sets, 15 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1368440_at	solute carrier family 3, member 1	<i>Slc3a1</i>	NM_017216	neutral amino acid transport
5	WKY	1390835_at	solute carrier family 47, member 1	<i>Slc47a1</i>	AI013568	cationic drug transport
4	WKY	1369690_at	solute carrier family 2, member 13	<i>Slc2a13</i>	NM_133611	H(+)-myo-inositol cotransporter
3	WKY	1368696_at	FXD domain-containing ion transport regulator 7	<i>Fxyd7</i>	NM_022008	ion transport regulation
3	WKY	1375071_at	nucleoporin 133	<i>Nup133</i>	BE119719	RNA nuclear export
3	WKY	1377765_at	chloride intracellular channel 4	<i>Clc4</i>	AA848723	chloride channel; regulator of pore-forming function
3	WKY	1390530_at	solute carrier family 16, member 12	<i>Slc16a12</i>	AI169239	Proton-linked monocarboxylate transporter
5	GK	*1368418_a_at	GPI-anchored ceruloplasmin	<i>Cp</i>	AF202115	iron transport regulation
5	GK	*1368419_at	GPI-anchored ceruloplasmin	<i>Cp</i>	AF202115	iron transport regulation
5	GK	*1382431_at	ATP-binding cassette, sub-family A, member 1	<i>Abca1</i>	AI103530	cholesterol efflux transporter
5	GK	1386770_x_at	potassium voltage-gated channel, Isk-related family member 2	<i>Kcne2</i>	AW920063	voltage-gated potassium channel
4	GK	1370176_at	trafficking protein, kinesin binding 2	<i>Trak2</i>	BG378620	intracellular protein transport
4	GK	1380981_at	stonin 2	<i>Ston2</i>	AW534519	endocytosis
3	GK	*1368317_at	aquaporin 7	<i>Aqp7</i>	NM_019157	urea and glycerol channel
3	GK	*1391500_at	aquaporin 7	<i>Aqp7</i>	BF282889	urea and glycerol channel
3	GK	1392531_at	tocopherol (alpha) transfer protein-like	<i>Ttpal</i>	AI178693	alpha-tocopherol transport
3	GK	*1394490_at	ATP-binding cassette 1, sub-family A, member 1	<i>Abca1</i>	AI502114	cholesterol efflux transporter
3	GK	1398635_at	solute carrier family 10 (sodium/bile acid cotransporter), member 6	<i>Slc10a6</i>	BF565662	sulfo-conjugated steroid hormone transporter

G. Protein Processing (17 probe sets, 16 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
4	WKY	1379747_at	Protease, serine, 35	<i>Prss35</i>	AA866443	serine protease

Table 3. Cont'd.

G. Protein Processing (17 probe sets, 16 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
4	WKY	1381503_at	DNA-damage inducible protein 2	<i>Ddi2</i>	AI073168	endopeptidase activity; protein catabolism
3	WKY	1369215_a_at	carboxypeptidase D	<i>Cpd</i>	NM_012836	trans-Golgi network trafficking
3	WKY	1376129_at	vacuolar protein sorting 13 homolog C	<i>Vps13c</i>	BE108174	structural component of cytoskeleton
3	WKY	1379390_at	ST6-N-acetylgalactosaminide alpha-2,6-sialyltransferase 2	<i>St6galnac2</i>	AA891414	protein glycosylation
5	GK	1383510_at	Ubiquitin protein ligase E3A	<i>Ube3a</i>	AI230360	Protein degradation; protein ubiquitination.
4	GK	1381990_at	N-acetylgalactosaminyltransferase 1	<i>Galnt1</i>	AA963979	glycoprotein synthesis
4	GK	1385099_at	scieillin	<i>Scel</i>	BG378310	structural protein
4	GK	1393617_at	SH3 domain containing ring finger 2	<i>Sh3rf2</i>	AW530317	E3 ubiquitin-protein ligase
4	GK	*1393842_at	coiled-coil domain containing 77	<i>Ccdc77</i>	BF391556	glycoprotein synthesis
3	GK	*1390284_at	coiled-coil domain containing 77	<i>Ccdc77</i>	BM383683	glycoprotein synthesis
3	GK	1370007_at	protein disulfide isomerase family A, member 4	<i>Pdia4</i>	NM_053849	catalyze the rearrangement of -S-S- bonds in proteins
3	GK	1371442_at	hypoxia up-regulated 1	<i>Hyo1</i>	BI282904	molecular chaperone; protein folding
3	GK	1373152_at	protease, serine, 23	<i>Prss23</i>	AI177099	serine protease
3	GK	1384254_at	OTU domain containing 1	<i>Otud1</i>	AI717553	ubiquitin removal; protein turnover
3	GK	1392961_at	MOB1, Mps one binder kinase activator-like 1B	<i>Mobkl1b</i>	AW534383	serine/threonine kinase activity
3	GK	1393387_at	26 serine protease	<i>P11</i>	BF411859	protease activity

H. Cell Cycle/Cell Growth (10 probe sets, 10 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1390722_at	nuclear casein kinase and cyclin-dependent kinase substrate 1	<i>Nucks1</i>	AW531272	substrate of cdk1
4	WKY	1376875_at	telomeric repeat binding factor 2	<i>Terf2</i>	AI454691	cell cycle regulation
3	WKY	1372685_at	cyclin-dependent kinase inhibitor 3	<i>Cdkn3</i>	BE113362	cell cycle regulation
5	GK	1378419_at	ribonuclease, RNase A family, 2	<i>Rhase2</i>	AI177934	RNA catabolism
5	GK	1383977_a_at	RRS1 ribosome biogenesis regulator homolog	<i>Rrs1</i>	BM388500	ribosome biogenesis
5	GK	1388578_at	TatD DNase domain containing 3	<i>Tatdn3</i>	BI288621	deoxyribonuclease
4	GK	1368290_at	cysteine rich protein 61	<i>Cyr61</i>	NM_031327	extracellular signaling molecule
3	GK	1369595_at	fibroblast growth factor 23	<i>Fgf23</i>	NM_130754	signaling molecule
3	GK	1382089_at	maternally expressed 3	<i>Meg3</i>	AI070489	negative regulation of cell proliferation
3	GK	1398679_at	REX2, RNA exonuclease 2 homolog	<i>Rexo2</i>	AI639098	DNA and RNA metabolism

I. Miscellaneous (20 probe sets, 20 genes)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1377778_at	ischemia related factor vof-16	<i>Vof-16</i>	BE107282	ischemia
4	WKY	1368250_at	tektin 1	<i>Tekt1</i>	NM_053508	structural component of ciliary and flagellar microtubules
4	WKY	1370511_at	fibrinogen, B beta polypeptide	<i>Fgb</i>	U05675	fibrin formation; cofactor in platelet aggregation
4	WKY	1382193_at	CDGSH iron sulfur domain 2	<i>Cisd2</i>	BI294188	calcium homeostasis
4	WKY	1385465_at	sialic acid binding Ig-like lectin 5	<i>Stglec5</i>	BG379188	mediates sialic-acid dependent binding to cells
4	WKY	1386941_at	plectin 1	<i>Plec1</i>	NM_022401	cross-linking and stabilization of cytoskeletal intermediate filaments
4	WKY	1392411_at	tubulointerstitial nephritis antigen	<i>Tinag</i>	AI411848	mediates adhesion of proximal tubule epithelial cells
3	WKY	1370350_x_at	urinary protein 2	<i>Rup2</i>	AF368860	secreted protein
3	WKY	1370597_at	syntaxin 17	<i>Stx17</i>	AF115435	Implicated in vesicle trafficking to lysosomes
3	WKY	1371245_a_at	hemoglobin, beta	<i>Hbb</i>	BI287300	component of hemoglobin tetramer
3	WKY	1376311_at	netrin G1	<i>Ntn1</i>	BM391312	regulates cell adhesion, motility, proliferation, differentiation
3	WKY	1385673_at	replication protein A complex interacting protein	<i>Rpain</i>	BG666060	import of RPA complex into the nucleus
3	WKY	1389918_at	palladin, cytoskeletal associated protein	<i>Pall</i>	BM391364	cell shape, adhesion
3	WKY	1393705_at	CD2-associated protein	<i>Cd2ap</i>	AA819035	regulator of actin cytoskeleton
5	GK	1381434_s_at	nidogen 2	<i>Nid2</i>	AW253721	cell-extracellular matrix interactions
5	GK	1394459_at	protein CXorf17 homolog	<i>CXorf17</i>	AI715738	transmembrane protein
3	GK	1373162_at	transmembrane protein 41A	<i>Tmem41a</i>	AI600085	cell-cell interactions
3	GK	1378866_at	actin-binding LIM protein 1	<i>Ablim1</i>	BF401176	Cytoskeletal organization
3	GK	1389086_at	sushi domain containing 4	<i>Susd4</i>	BF408444	transmembrane protein
3	GK	1391552_at	translin	<i>Tsn</i>	BM391661	chromosomal translocation

J. ESTs (104 probe sets)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1374583_at	EST	---	BI288131	Unknown
5	WKY	1376332_at	EST	---	BF396082	Unknown
5	WKY	1376840_at	EST	---	AI103040	Unknown
5	WKY	1378492_at	EST	---	BF396209	Unknown
5	WKY	1381508_at	EST	---	BE098143	Unknown
5	WKY	1383058_at	EST	---	AI410438	Unknown
5	WKY	1383923_at	EST	---	BF410662	Unknown

Table 3. Cont'd.

J. ESTs (104 probe sets)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
5	WKY	1384104_at	EST	---	BE115892	Unknown
5	WKY	1386855_at	EST	---	AA944136	Unknown
5	WKY	1392788_at	EST	---	AA944323	Unknown
5	WKY	1392954_at	EST	---	AI029637	Unknown
5	WKY	1394756_at	EST	---	AA955494	Unknown
5	WKY	1395112_at	EST	---	AI555810	Unknown
5	WKY	1395829_at	EST	---	AI501441	Unknown
5	WKY	1396877_at	EST	---	AI715187	Unknown
5	WKY	1398528_at	EST	---	BE117514	Unknown
4	WKY	1374558_at	EST	---	AI010316	Unknown
4	WKY	1378168_at	EST	---	BG377391	Unknown
4	WKY	1379398_at	EST	---	BM385853	Unknown
4	WKY	1380782_at	EST	---	AW528654	Unknown
4	WKY	1381218_at	EST	---	BF386446	Unknown
4	WKY	1382497_at	EST	---	AA875457	Unknown
4	WKY	1382702_at	EST	---	AA998276	Unknown
4	WKY	1382987_at	EST	---	AA874945	Unknown
4	WKY	1391041_at	EST	---	AI170690	Unknown
4	WKY	1391150_at	EST	---	BM387773	Unknown
4	WKY	1391757_at	EST	---	AA926072	Unknown
4	WKY	1392074_at	EST	---	AA926082	Unknown
4	WKY	1395014_at	EST	---	BI282068	Unknown
4	WKY	1395260_at	EST	---	BM383147	Unknown
4	WKY	1395762_at	EST	---	BG670091	Unknown
4	WKY	1396184_at	EST	---	AW435238	Unknown
3	WKY	1375422_at	EST	---	AI710284	Unknown
3	WKY	1377195_at	EST	---	BF406252	Unknown
3	WKY	1378458_at	EST	---	BI281745	Unknown
3	WKY	1380399_at	EST	---	BF393255	Unknown
3	WKY	1381590_at	EST	---	BI295719	Unknown
3	WKY	1381961_at	EST	---	AI502554	Unknown
3	WKY	1382926_s_at	EST	---	BF287720	Unknown
3	WKY	1383814_at	EST	---	BF556870	Unknown
3	WKY	1383864_at	EST	---	BF412512	Unknown
3	WKY	1384575_at	EST	---	AI137418	Unknown
3	WKY	1386466_at	EST	---	H33093	Unknown
3	WKY	1390749_at	EST	---	BF394188	Unknown
3	WKY	1391355_at	EST	---	AW531049	Unknown
3	WKY	1391697_at	EST	---	BM392082	Unknown
3	WKY	1392352_at	EST	---	AW521481	Unknown
3	WKY	1392381_at	EST	---	BM382852	Unknown
3	WKY	1392860_at	EST	---	AI045117	Unknown
3	WKY	1393952_at	EST	---	BI278833	Unknown
3	WKY	1395566_at	EST	---	AW524204	Unknown
3	WKY	1396240_at	EST	---	AI575096	Unknown
3	WKY	1397153_at	EST	---	BE115262	Unknown
3	WKY	1397206_at	EST	---	AI548120	Unknown
5	GK	1371776_at	EST	---	AA819268	Unknown
5	GK	1372239_at	EST	---	AW527228	Unknown
5	GK	1374924_at	EST	---	BE098025	Unknown
5	GK	1380165_at	EST	---	AI234713	Unknown
5	GK	1381626_at	EST	---	BE105470	Unknown
5	GK	1381940_at	EST	---	AW527798	Unknown
5	GK	1383117_at	EST	---	AI232414	Unknown
5	GK	1384058_at	EST	---	AI059089	Unknown
5	GK	1386514_at	EST	---	AA819731	Unknown
5	GK	1389935_at	EST	---	BI300457	Unknown
5	GK	1392304_at	EST	---	BI295865	Unknown
5	GK	1392504_at	EST	---	BI297184	Unknown
5	GK	1393169_at	EST	---	AI578145	Unknown
5	GK	1393476_at	EST	---	AI717594	Unknown
5	GK	1395030_at	EST	---	BM390366	Unknown
5	GK	1395361_at	EST	---	AW142913	Unknown
4	GK	1372059_at	EST	---	AA891759	Unknown
4	GK	1377584_at	EST	---	BI297375	Unknown
4	GK	1379034_at	EST	---	AI029552	Unknown
4	GK	1379411_at	EST	---	AI180253	Unknown

Table 3. Cont'd.

J. ESTs (104 probe sets)

Age	Strain	Probe ID	Gene Name	Symbol	Accession	Gene Function
4	GK	1382956_at	EST	---	AA943750	Unknown
4	GK	1384309_at	EST	---	BF393535	Unknown
4	GK	1384717_at	EST	---	AA894199	Unknown
4	GK	1389467_at	EST	---	BM391248	Unknown
4	GK	1393916_at	EST	---	AI044713	Unknown
4	GK	1395795_at	EST	---	AW528651	Unknown
3	GK	1374148_at	EST	---	BI296414	Unknown
3	GK	1374606_at	EST	---	BF283073	Unknown
3	GK	1375601_at	EST	---	BF410219	Unknown
3	GK	1375758_at	EST	---	BF404935	Unknown
3	GK	1377316_at	EST	---	BF397728	Unknown
3	GK	1378942_at	EST	---	AI234028	Unknown
3	GK	1379107_at	EST	---	BF416861	Unknown
3	GK	1379859_at	EST	---	AA964506	Unknown
3	GK	1379929_at	EST	---	BF405278	Unknown
3	GK	1380557_at	EST	---	BE119497	Unknown
3	GK	1383608_at	EST	---	AI145231	Unknown
3	GK	1390414_at	EST	---	BI296515	Unknown
3	GK	1390491_at	EST	---	BM390772	Unknown
3	GK	1390906_at	EST	---	BE100932	Unknown
3	GK	1391112_at	EST	---	BF405127	Unknown
3	GK	1391312_at	EST	---	BE108090	Unknown
3	GK	1391793_at	EST	---	BF284687	Unknown
3	GK	1392026_at	EST	---	BF391823	Unknown
3	GK	1394574_at	EST	---	BF398290	Unknown
3	GK	1394689_at	EST	---	BE117217	Unknown
3	GK	1394876_at	EST	---	AI454929	Unknown
3	GK	1395680_at	EST	---	BF399925	Unknown
3	GK	1396067_at	EST	---	AI511395	Unknown
3	GK	1396073_at	EST	---	AW527466	Unknown

Column labeled "Strain" indicates the strain which shows higher relative expression of that probe set.
 Probe sets marked with an asterisk (*) indicates duplicate probe sets for a gene.