

**Table S1. Microarray analysis of genes that are differentially expressed in E16.5 DRGs of control and *Runx1* CKO animals.** Shown are genes with a fold change greater than or equal to 1.5, and a p-value less than or equal to 0.05. Genes that exhibited reduced or increased expression in *Runx1* CKO DRGs relative to control are shown in table S1.1 and S1.2, respectively.

**Table S1.1**

Probe Set ID	Gene Symbol	Gene Title	Fold Change	P-value
1443392_at	Trpv1	transient receptor potential cation channel, subfamily V, member 1	3.855363	0.00036 4
1418723_at	Lpar3	lysophosphatidic acid receptor 3	3.150196	0.01752 8
1424633_at	Camk1g	calcium/calmodulin-dependent protein kinase I gamma	2.943805	0.00352 7
1448459_at	Kcnip1	Kv channel-interacting protein 1	2.265259	0.03317
1443959_at	Tmem72	transmembrane protein 72	2.163699	0.00324 9
1438112_at	9430021M05Ri k	RIKEN cDNA 9430021M05 gene	2.14351	0.00782 4
1436100_at	Sh2d5	SH2 domain containing 5	2.11848	0.03425
1441363_at	Frmpd3	FERM and PDZ domain containing 3	2.078189	0.03923 6

1435772_at	Kif21b	kinesin family member 21B	2.015971	0.00020 4
1416456_a_a t	Chia	chitinase, acidic	2.005046	0.02808 7
1416785_at	Kcnip1	Kv channel-interacting protein 1	1.996721	0.00274 3
1419654_at	Tle3	transducin-like enhancer of split 3, homolog of Drosophila E(spl)	1.934638	0.04911 5
1428074_at	Tmem158	transmembrane protein 158	1.902171	0.04119 9
1420564_at	Insrr	insulin receptor-related receptor	1.868479	0.00946 8
1452263_at	Slc35f4	solute carrier family 35, member F4	1.823904	0.01666 7
1451062_a_a t	Pex5l	peroxisomal biogenesis factor 5-like	1.819641	0.02957 7
1434635_at	Rph3a	rabphilin 3A	1.803495	0.03609 1
1455000_at	Gpr68	G protein-coupled receptor 68	1.779183	0.03303 6
1450224_at	Col4a3	collagen, type IV, alpha 3	1.762817	0.02183 8
1438160_x_a	Slco4a1	solute carrier organic anion	1.745016	0.04389

t		transporter family, member 4a1		8
1425483_at	LOC100044677 /// Tox	similar to thymus high mobility group box protein TOX /// thymocyte selection-as	1.744519	0.02611 9
1419655_at	Tle3	transducin-like enhancer of split 3, homolog of Drosophila E(spl)	1.716283	0.02622 6
1429805_at	Myo1a	myosin IA	1.714405	0.00056 9
1433988_s_a t	C230098O21Ri k	RIKEN cDNA C230098O21 gene	1.707104	0.04415 4
1440056_at	---	---	1.672219	0.00193 1
1424923_at	Serpina3g	serine (or cysteine) peptidase inhibitor, clade A, member 3G	1.65806	0.00216 4
1421037_at	Npas2	neuronal PAS domain protein 2	1.654117	0.02777 4
1445941_at	---	---	1.650902	0.02853
1417542_at	Rps6ka2	ribosomal protein S6 kinase, polypeptide 2	1.646436	0.02077 4
1422710_a_a t	Cacna1h	calcium channel, voltage-dependent, T type, alpha 1H subunit	1.629623	0.02476 6
1436013_at	Gsg1l	GSG1-like	1.602431	0.00299 7

1417392_a_a t	Slc7a7	solute carrier family 7 (cationic amino acid transporter, y+ system), member 7	1.598559	0.04868 1
1453801_at	Them5	thioesterase superfamily member 5	1.595386	0.02138 5
1431852_at	A730035I17Rik	RIKEN cDNA A730035I17 gene	1.584555	0.00085 4
1441298_at	---	---	1.565934	0.03989 3
1450174_at	Ptprt	protein tyrosine phosphatase, receptor type, T	1.557751	0.02724 1
1430159_at	5830408C22Rik	RIKEN cDNA 5830408C22 gene	1.520074	0.03931 8
1456047_at	LOC433466 /// Pla2g4b	phospholipase A2, group IVB (cytosolic)	1.517543	0.04928 4
1438055_at	Rarres1	retinoic acid receptor responder (tazarotene induced) 1	1.511225	0.02733
1457128_at	AL024213	expressed sequence AL024213	1.508931	0.04055 5

**Table S1.2**

<b>Probe Set ID</b>	<b>Gene Symbol</b>	<b>Gene Title</b>	<b>Fold Change</b>	<b>P -Value</b>
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1455931_at	Chrna3	cholinergic receptor, nicotinic, alpha polypeptide 3	4.589469	0.03047 5
1417256_at	Mmp13	matrix metalloproteinase 13	3.542615	0.01981 4
1433607_at	Cbln4	cerebellin 4 precursor protein	3.482604	0.01162 5
1435424_x_a t	---	---	3.416324	0.00109 2
1433551_at	Vat1l	vesicle amine transport protein 1 homolog-like (T. californica)	3.278425	0.01854 8
1440484_at	Unc5d	unc-5 homolog D (C. elegans)	3.169972	0.00250 8
1441329_at	Galr1	galanin receptor 1	3.067817	0.00084 3
1452010_at	Chrna3	cholinergic receptor, nicotinic, alpha polypeptide 3	2.952662	0.00011 2
1451263_a_a t	Fabp4	fatty acid binding protein 4, adipocyte	2.837796	0.035
1417023_a_a t	Fabp4	fatty acid binding protein 4, adipocyte	2.716484	0.03439 5
1439272_at	Lcorl /// LOC100046011	ligand dependent nuclear receptor corepressor-like /// hypothetical protein LOC1	2.610205	0.04198

1416468_at	Aldh1a1	aldehyde dehydrogenase family 1, subfamily A1	2.508498	0.04671 1
1437695_at	Prokr2	prokineticin receptor 2	2.473296	0.04534 1
1443365_at	Htr4	5 hydroxytryptamine (serotonin) receptor 4	2.377891	0.04330 1
1430107_at	Acbd7	acyl-Coenzyme A binding domain containing 7	2.213863	0.00656 9
1417680_at	Kcna5	potassium voltage-gated channel, shaker-related subfamily, member 5	2.065996	0.03374 9
1439887_at	---	---	2.048765	0.00727 3
1449254_at	Spp1	secreted phosphoprotein 1	2.038316	0.04484 4
1418304_at	Pcdh21	protocadherin 21	2.020208	0.01101 7
1457008_at	Chrb4	cholinergic receptor, nicotinic, beta polypeptide 4	1.957697	0.01648 7
1419756_at	Dgkg	diacylglycerol kinase, gamma	1.914247	0.03918 3
1436761_s_at	1200015N20Rik	RIKEN cDNA 1200015N20 gene	1.891189	0.01325
1456233_at	---	---	1.871748	0.02684 1

1440531_at	Rbm11	RNA binding motif protein 11	1.870702	0.04585 2
1456609_at	Camk2n1	calcium/calmodulin-dependent protein kinase II inhibitor 1	1.868836	0.00293 9
1443322_at	---	---	1.868507	0.01830 1
1437883_s_at	---	---	1.84781	0.04731 1
1452004_at	Calca	calcitonin/calcitonin-related polypeptide, alpha	1.846593	0.03499 4
1442379_at	EG574403	predicted gene, EG574403	1.834135	0.04986 2
1436444_at	6030405A18Rik	RIKEN cDNA 6030405A18 gene	1.819695	0.01243
1436493_at	BB181834	expressed sequence BB181834	1.814729	0.00105 8
1437262_x_at	Bcas2	breast carcinoma amplified sequence 2	1.813717	0.04303 2
1424679_at	Mab2111	mab-21-like 1 (C. elegans)	1.8063	0.01242 4
1438698_at	Tmem132c	transmembrane protein 132C	1.80257	0.01279 1
1426222_s_at	Vwa5a	von Willebrand factor A domain containing 5A	1.799035	0.00840 1

1434150_a_a t	Higd1c /// Mettl7a1 /// Mettl7a2	HIG1 domain family, member 1C /// methyltransferase like 7A1 /// methyltransferase	1.793921	0.0031
1456397_at	Cdh4	cadherin 4	1.789226	0.00695 1
1437781_at	Insm2	insulinoma-associated 2	1.785904	0.04310 2
1445247_at	C530044C16Rik	RIKEN cDNA C530044C16 gene	1.77605	0.00847 3
1460244_at	Upb1	ureidopropionase, beta	1.764131	0.00543 2
1451033_a_a t	Trpc4	transient receptor potential cation channel, subfamily C, member 4	1.75628	0.03859 6
1449251_at	Ndp	Norrie disease (pseudoglioma) (human)	1.749063	0.02079 5
1460033_at	C030002C11Rik	RIKEN cDNA C030002C11 gene	1.73966	0.03520 7
1437800_at	Edaradd	EDAR (ectodysplasin-A receptor)- associated death domain	1.738899	0.00891 4
1423571_at	S1pr1	sphingosine-1-phosphate receptor 1	1.718975	0.04030 7
1423016_a_a t	Gypa	glycophorin A	1.709037	0.04810 6



1429123_at	Rab27a	RAB27A, member RAS oncogene family	1.70457	0.02282 7
1434297_at	E130304F04Rik /// LOC100040601	RIKEN cDNA E130304F04 gene /// hypothetical protein LOC100040601	1.69251	0.00360 4
1448421_s_at	Aspn	asporin	1.656201	0.02869 7
1419599_s_at	Ms4a6d	membrane-spanning 4-domains, subfamily A, member 6D	1.654013	0.04385 5
1445838_at	---	---	1.646932	0.04688 8
1449033_at	Tnfrsf11b	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)	1.644202	0.03410 6
1421854_at	Fgl2	fibrinogen-like protein 2	1.640142	0.00012 7
1427313_at	Ptgir	prostaglandin I receptor (IP)	1.636612	0.01807 2
1437989_at	Pde8b	phosphodiesterase 8B	1.624623	2.04E-05
1426937_at	6330406I15Rik	RIKEN cDNA 6330406I15 gene	1.601092	0.04924 8
1418454_at	Mfap5	microfibrillar associated protein 5	1.593589	0.02105 1

1442082_at	C3ar1	complement component 3a receptor 1	1.57566	0.04213 6
1418511_at	Dpt	dermatopontin	1.573438	0.02628 2
1429197_s_at	Rabgap1l	RAB GTPase activating protein 1- like	1.557097	0.02034 2
1419468_at	Clec14a	C-type lectin domain family 14, member a	1.548326	0.01202 9
1417012_at	Sdc2	syndecan 2	1.538801	0.03282 2
1435616_at	Cyp20a1	cytochrome P450, family 20, subfamily A, polypeptide 1	1.534345	0.04882 5
1457137_at	---	---	1.531957	0.04647
1424229_at	Dyrk3	dual-specificity tyrosine-(Y)- phosphorylation regulated kinase 3	1.524185	0.03706 6
1426514_at	4631426J05Rik	RIKEN cDNA 4631426J05 gene	1.50781	0.04772 5
1427319_at	A230046K03Ri k	RIKEN cDNA A230046K03 gene	1.506691	0.03640 2
1445767_at	Ptprd	protein tyrosine phosphatase, receptor type, D	1.501627	0.00102 5