# SUPPLEMENTARY INFORMATION

# RHOA inactivation enhances Wnt signaling and promotes colorectal cancer

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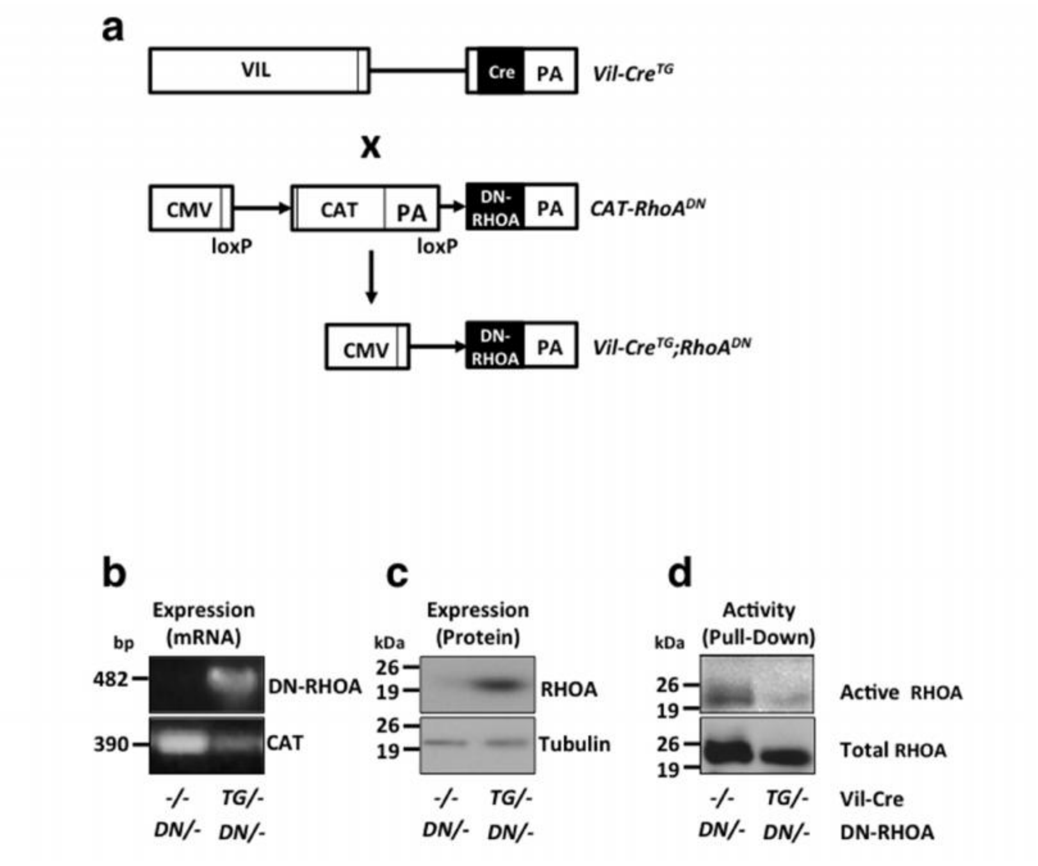
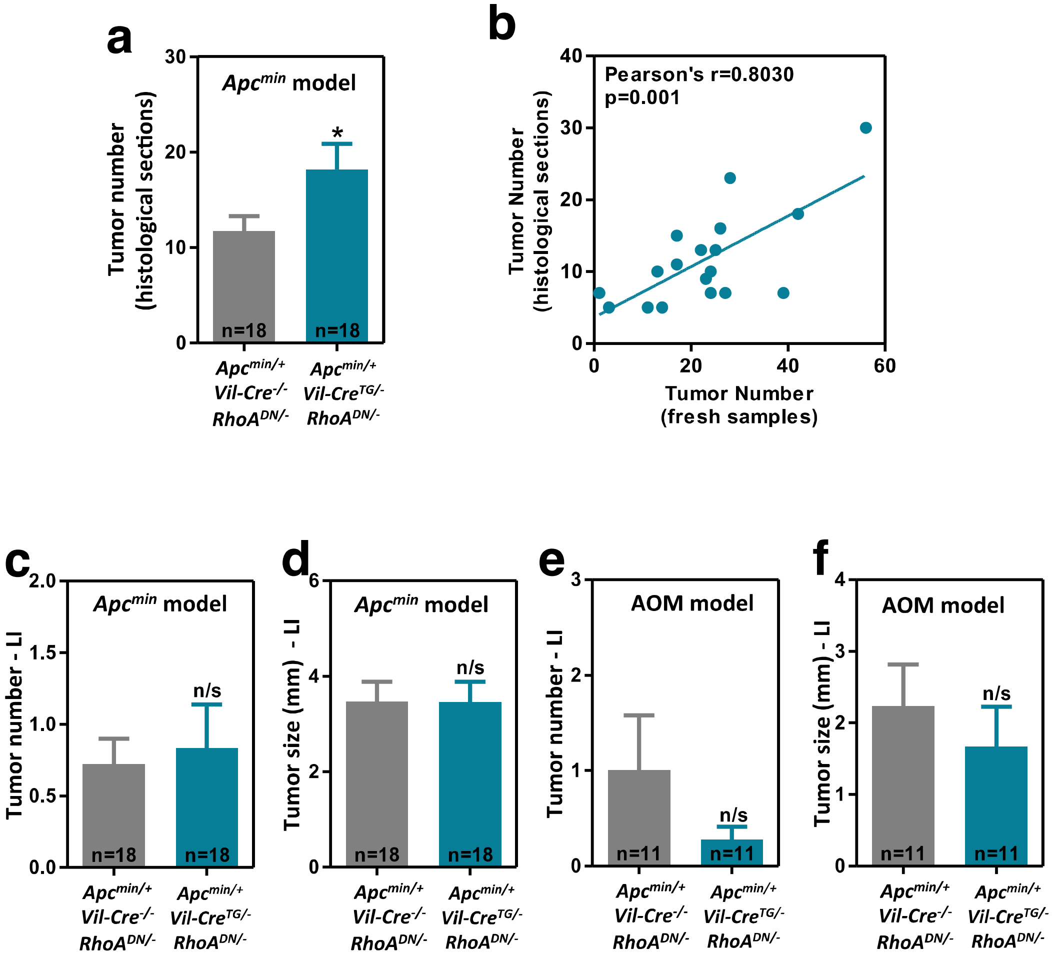
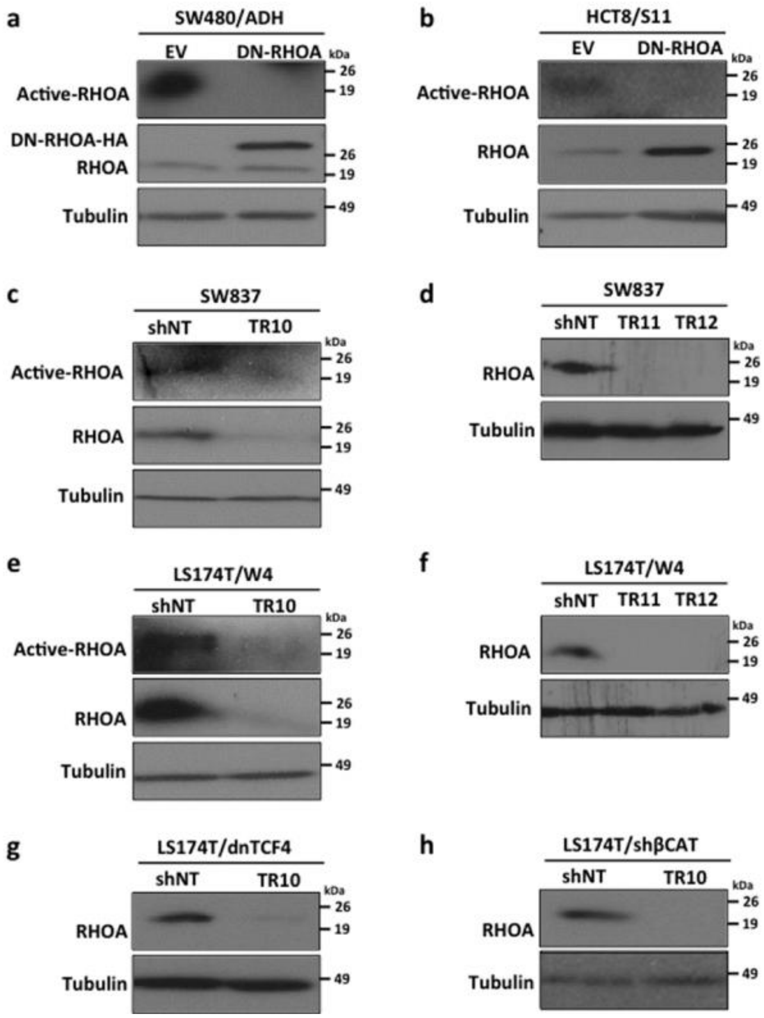
## SI FIGURES AND LEGENDS



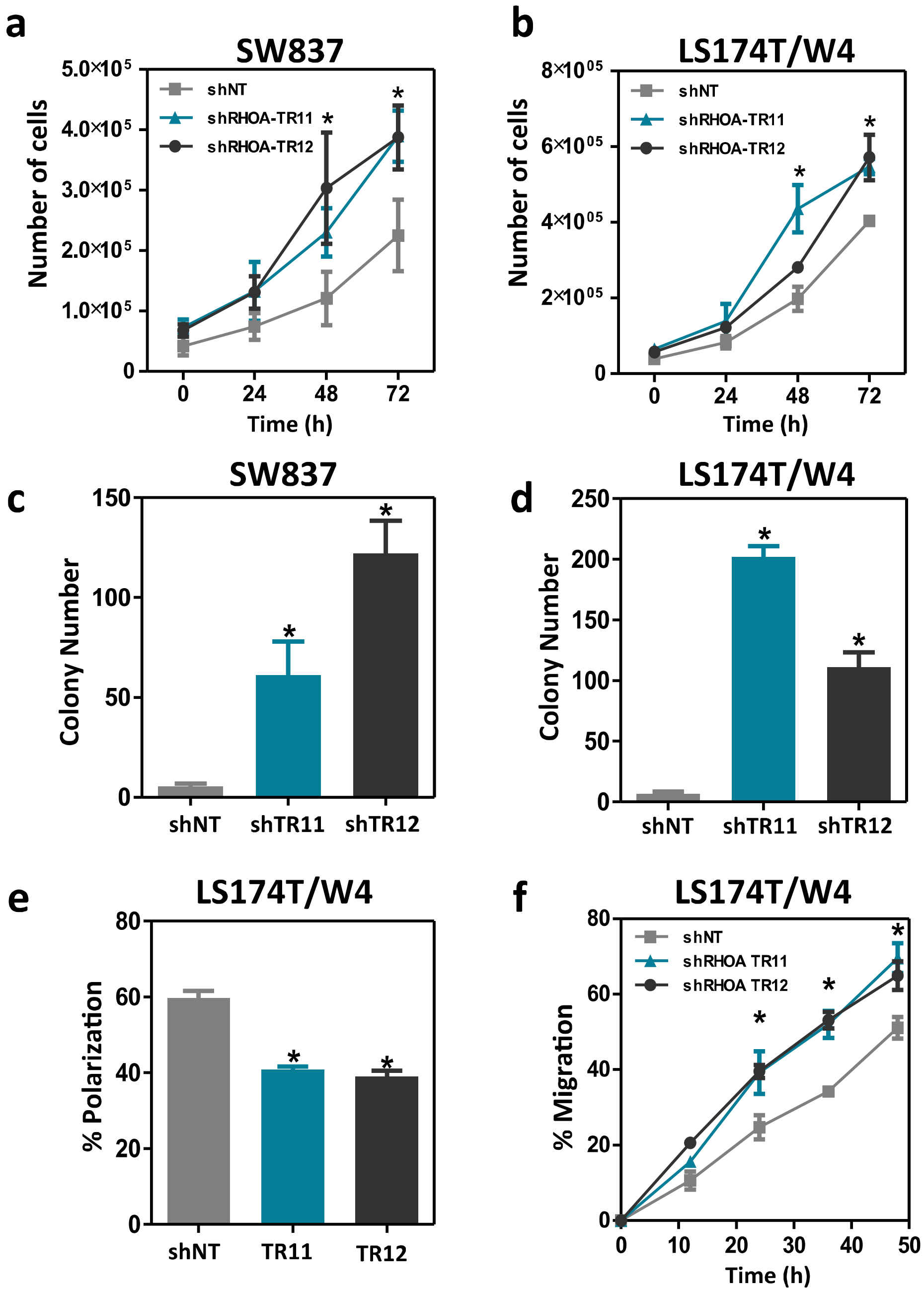
**Supplementary Figure 1**: **Validation of a mouse model conditionally expressing dominant negative RHOA.** (**a**) Mice expressing Cre recombinase under the control of the intestine-specific promoter of *Villin 1* (Vil-Cre) were crossed with *Cat-DN-RhoA* mice. In the double transgenic mice (*Vil-Cre*$^{TG/-}$*;RhoA*$^{DN/-}$), Cre-*loxP* recombination deletes the Cat cassette in the epithelial cells of the intestine, and *DN-RhoA* is then expressed. (**b**) Total RNA prepared from epithelial cells of the small intestine of *Vil-Cre*$^{-/-}$*;RhoA*$^{DN/-}$ or *Vil-Cre*$^{TG/-}$*;RhoA*$^{DN/-}$ mice was reverse transcribed and the levels of Cat and RhoA expression in the resulting cDNA samples were assessed after PCR amplification. (**c**) RhoA protein levels were assessed by Western blotting in mucosal samples from *Vil-Cre*$^{-/-}$*;RhoA*$^{DN/-}$ or *Vil-Cre*$^{TG/-}$*;RhoA*$^{DN/-}$ mice. (**d**) RhoA activity in the small intestinal mucosa of *Vil-Cre*$^{-/-}$*;RhoA*$^{DN/-}$ or *Vil-Cre*$^{TG/-}$*;RhoA*$^{DN/-}$ mice was determined by a GST-Rhotekin pulldown assay.



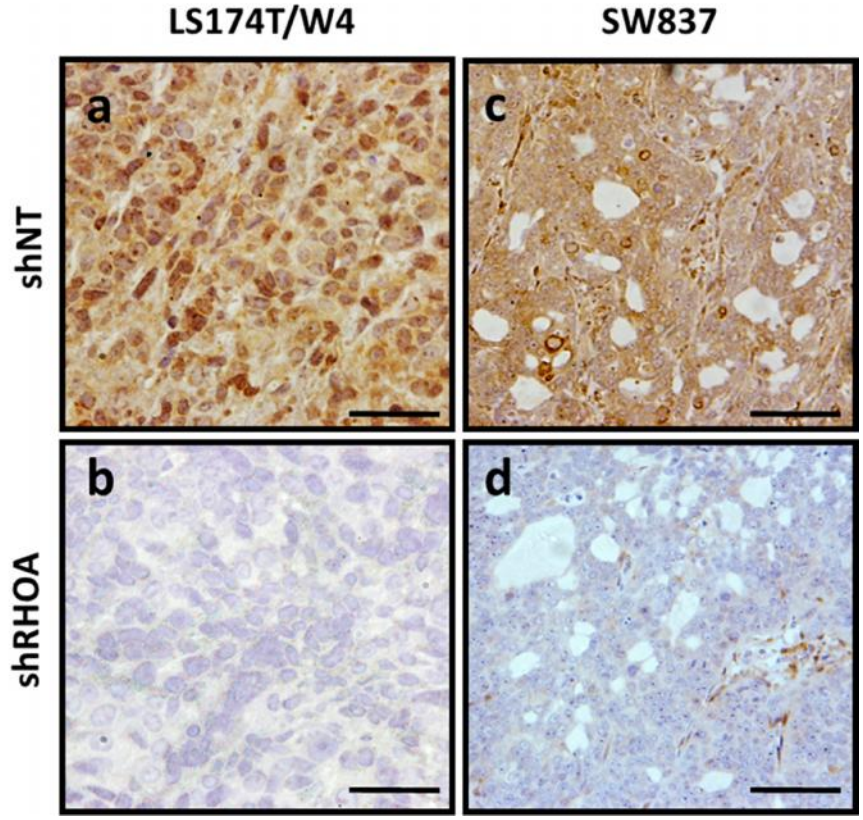
**Supplementary Figure 2**: **Effects of RhoA inactivation on intestinal tumorigenesis in mouse models.** (**a**) Number of tumors in histological sections from the small intestine of *Apc*$^{min/+}$ mice with RhoA inactivation (*Apc*$^{min/+}$;*Vil-Cre*$^{TG/-}$;*RhoA*$^{DN/-}$) and control animals with no DN-RhoA expression (*Apc*$^{min/+}$;*Vil-Cre*$^{-/-}$;*RhoA*$^{DN/-}$). (**b**) Correlation between the number of intestinal tumors observed macroscopically and on histological sections. (**c-f**) The number (**c** and **e**) and size (**d** and **f**) of macroscopically visible tumors in the large intestine of mice with or without DN-RhoA expression after either genetic (*Apc*$^{min}$ mutations; **c** and **d**) or carcinogen (AOM treatment; **e** and **f**) tumor initiation was quantified blinded from the animal identity. LI: large intestine. Mean ±SEM is shown. *Student's t-test $p<0.05$. N: number of animals. n/s: Student's t-test $p>0.05$.



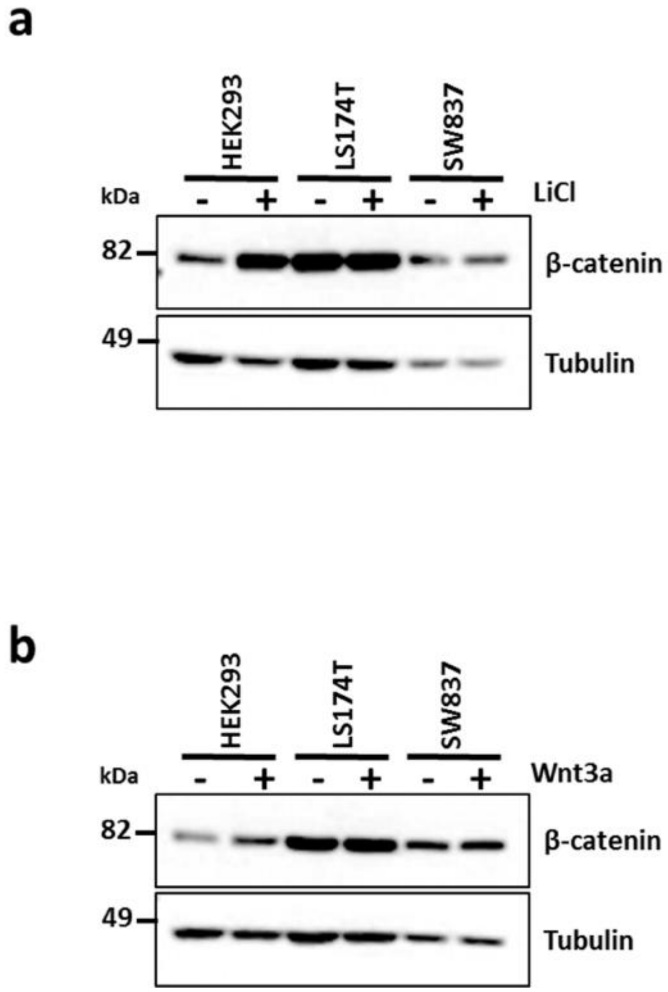
**Supplementary Figure 3**: **Validation of *in vitro* models of RHOA inactivation in colon cancer cells.** A dominant negative mutant of RHOA (T19N) was stably overexpressed in SW480/ADH (HA-tagged RHOA; **a**) and HCT8/S11 (un-tagged RHOA; **b**). EV: empty vector control. Stable RHOA knockdowns were generated by transduction with lentivirus expressing three different shRNAs against RHOA (TR10, TR11 and TR12) or a non-target shRNA (shNT) in the colon cancer cell lines SW837 (**c-d**)**,** LS174T/W4 (**e-f**), LS174T/dnTCF4 (**g**) and LS174T/siβCAT (**h**). The levels of total or active RHOA, as assessed by a GST-Rhotekin pulldown assay, are shown. Tubulin was used as a loading control.



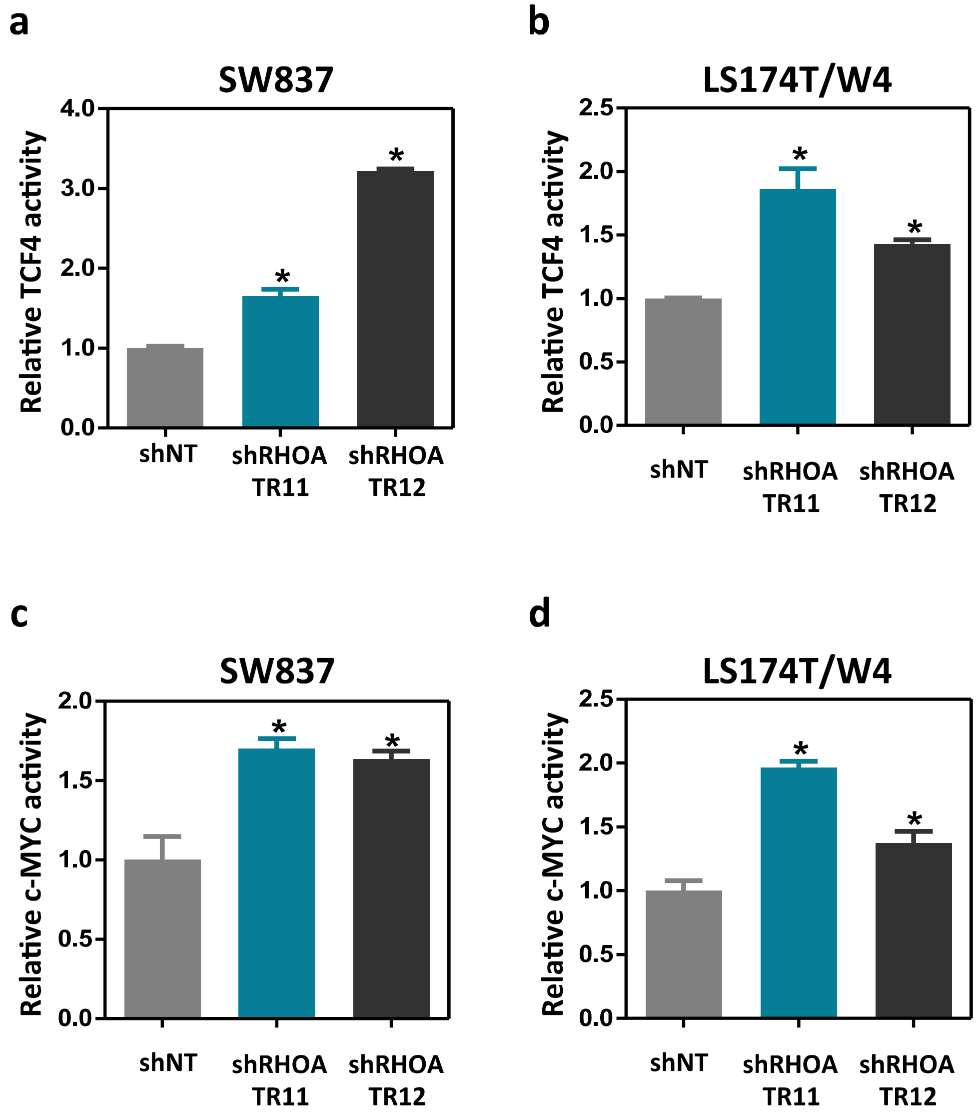
**Supplementary Figure 4: Effects of RHOA knockdown on growth, polarization capacity and migration of colon cancer cells.** To confirm on-target effects of the RHOA shRNAs used in the study, we assessed the effects of two additional shRNAs (TR11 and TR12) on cell proliferation (**a-b**), soft agar colony formation (**c-d**), polarization (**e**; LS174T/W4 cells after doxycycline-mediated LKB1 activation) and migration (**f**; percentage of wounded area closed after the indicated time) of the indicated colon cancer cells. The mean (±SEM) of three independent experiments carried out in triplicate is shown. *Student's t-test $p<0.05$.



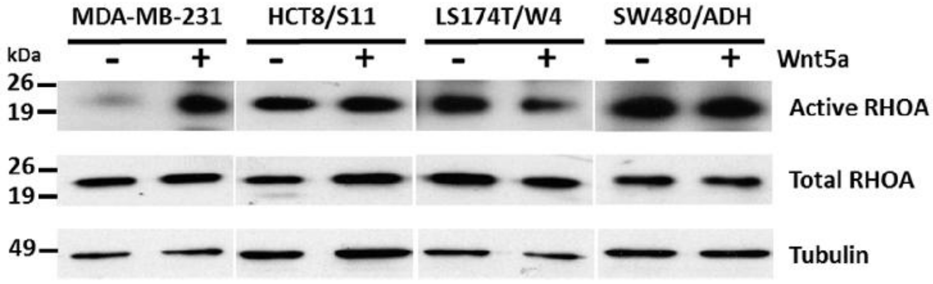
**Supplementary Figure 5: Stable shRNA-mediated knockdown of RHOA on colon cancer cells and confirmation of the specificity of the anti-RHOA antibody used.** RHOA protein levels were assessed by immunohistochemical staining with a mouse monoclonal anti-RHOA antibody (Santa Cruz; SC-418) on formalin-fixed, paraffin-embedded (FFPE) samples from subcutaneous xenografts of control (shNT) LS174T/W4 (**a**) and SW837 (**c**) cells, or the derivative cell lines with targeted inactivation of RHOA (shRHOA-TR10; **b** and **d**). The reduced levels of RHOA observed in the shRHOA xenografts compared to xenografts of control cells confirms both the knockdown of RHOA and the specificity of this antibody for immunostaining of RHOA on FFPE samples. Scale bars, 50 µm.



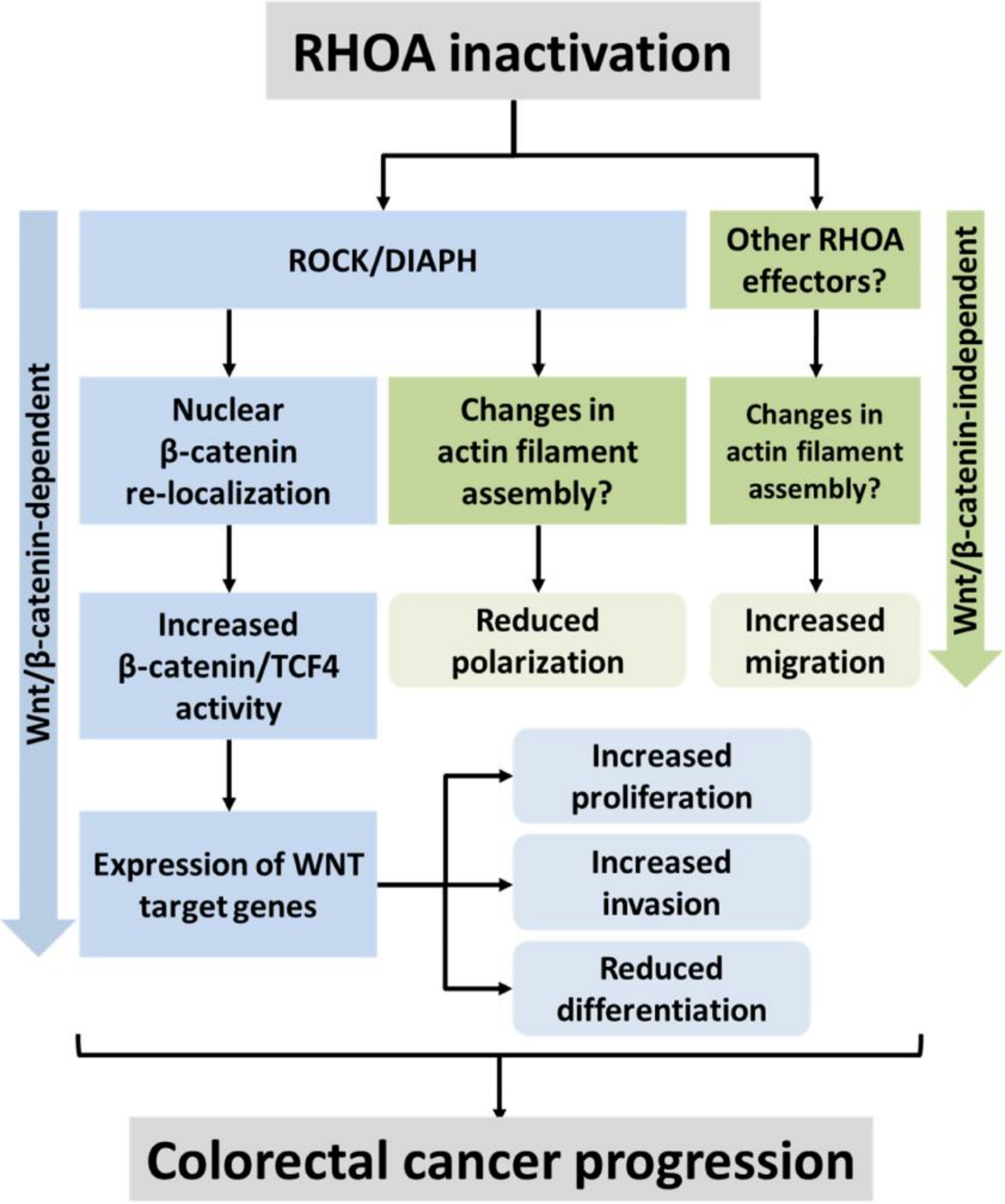
**Supplementary Figure 6: β-catenin destruction complex in colon cancer cells.** The β-catenin destruction complex was inhibited by either the GSK3β inhibitor LiCl (**a**) or the physiological canonical Wnt ligand Wnt3a (**b**). Western blotting of total cellular lysates showed elevated β-catenin levels in response to LiCl or Wnt3a in human kidney embryonic HEK293 cells, while no changes in total β-catenin were observed in the colon cancer cell lines tested (LS174T and SW837 cells). Tubulin was used as a loading control.



**Supplementary Figure 7: Effects of RHOA knockdown on TCF4/β-catenin and c-MYC activity.** To confirm on-target effects of the RHOA shRNA-TR10 used, we assessed the effects of two additional RHOA shRNAs (TR11 and TR12) on the transactivation activity of TCF4/β-catenin (**a** and **b**) and c-MYC (**c** and **d**) in SW837 (**a** and **c**) and LS174T/W4 (**b** and **d**) colon cancer cells. The mean (±SEM) of three independent experiments carried out in triplicate is shown. *Student's t-test $p<0.05$.



**Supplementary Figure 8: non-canonical Wnt signaling and RHOA activity in colon cancer cells.** MDA-MB-231 breast cancer cells and HCT8/S11, LS174T/W4 and SW480/ADH colon cancer cells were treated with the non-canonical Wnt ligand Wnt5a. The levels of active GTP-bound RHOA were determined using a GST-Rhotekin-RBD pull-down assay. Although as previously reported (Ref 42) Wnt5a treatment resulted in elevated active RHOA in MDA-MB-231 breast cancer cells, no significant changes were observed in colon cancer cells after Wnt5a treatment. Total RHOA levels are also shown. Tubulin was used as a loading control.



**Supplementary Figure 9: schematic representation of the main findings of the study.** RHOA inactivation in colon cancer cells results in the translocation of β-catenin from the membrane E-cadherin-bound pool to the nucleus and the ROCK/DIAPH1-dependent activation of β-catenin/TCF4 signaling, resulting in increased proliferation/invasion and reduced differentiation. In addition, the loss of RHOA leads to reduced polarization that is ROCK/DIAPH1-dependent and increased migration through alternative RHOA effector molecules. In blue and green are effects of RHOA inactivation that are Wnt/β-catenin-dependent and –independent, respectively.

**Figure 3a**

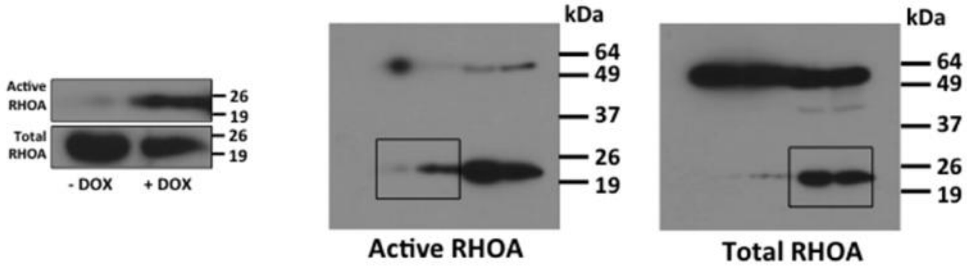
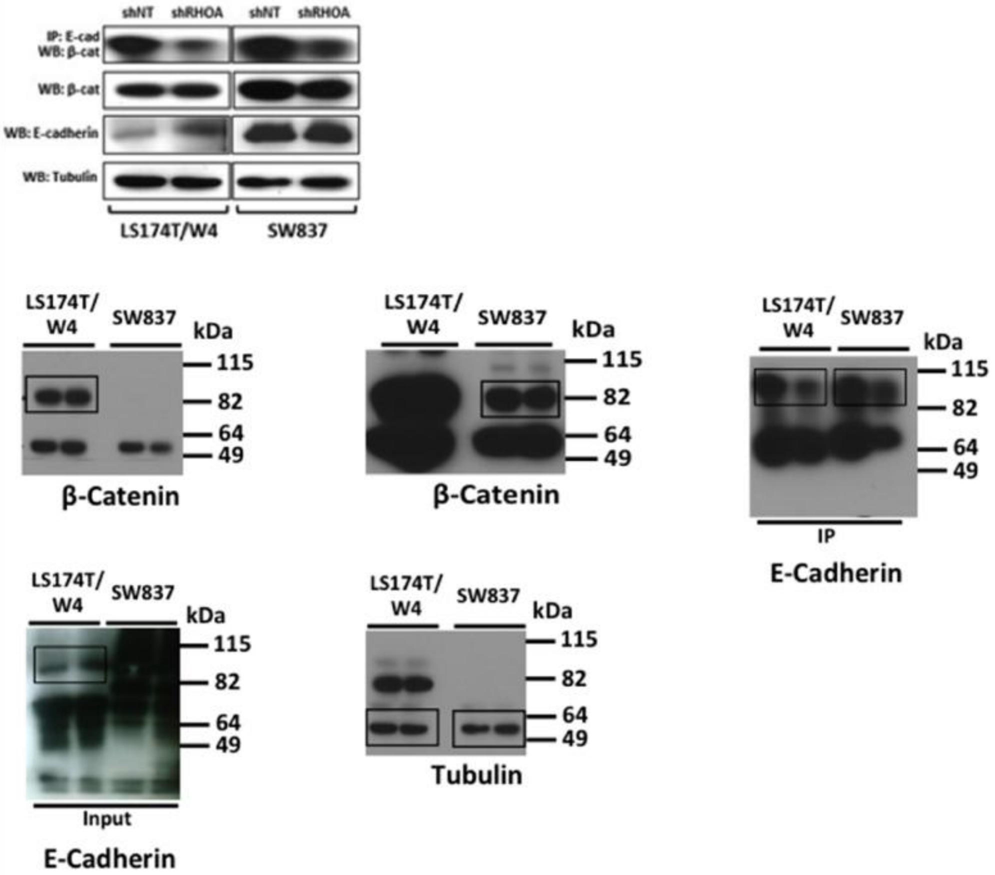
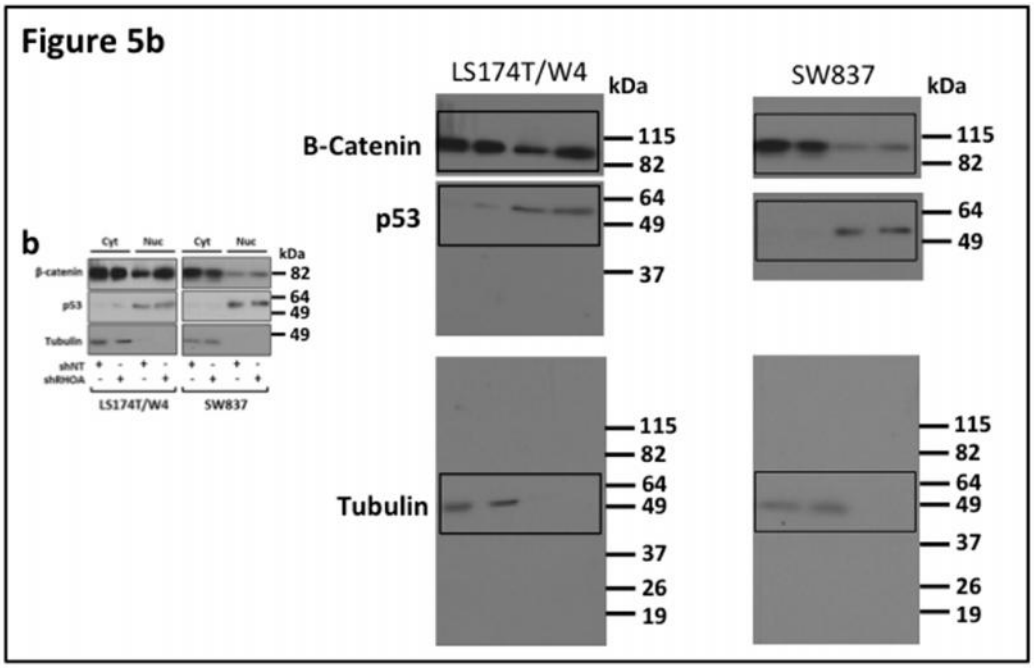


**Figure 5a**

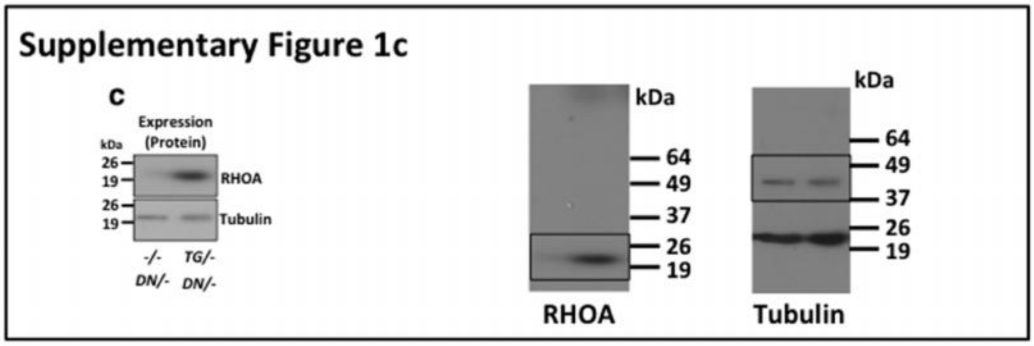


**Supplementary Figure 10:** Full-scan images of representative western blot.

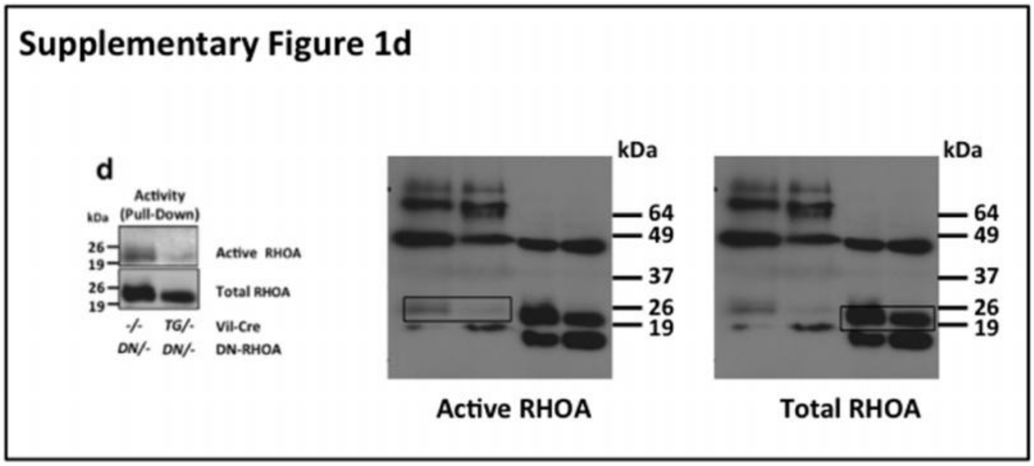
**Figure 5b**



**Supplementary Figure 1c**

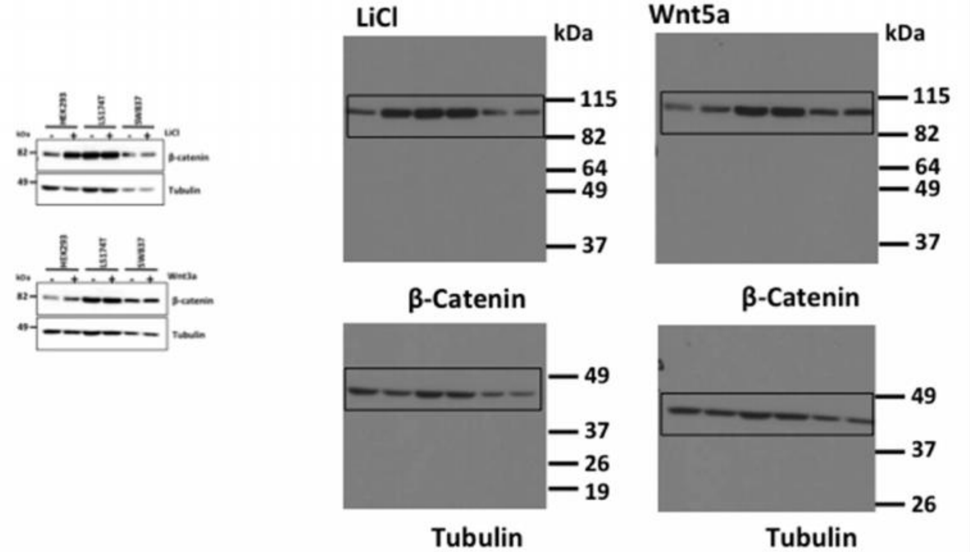


**Supplementary Figure 1d**

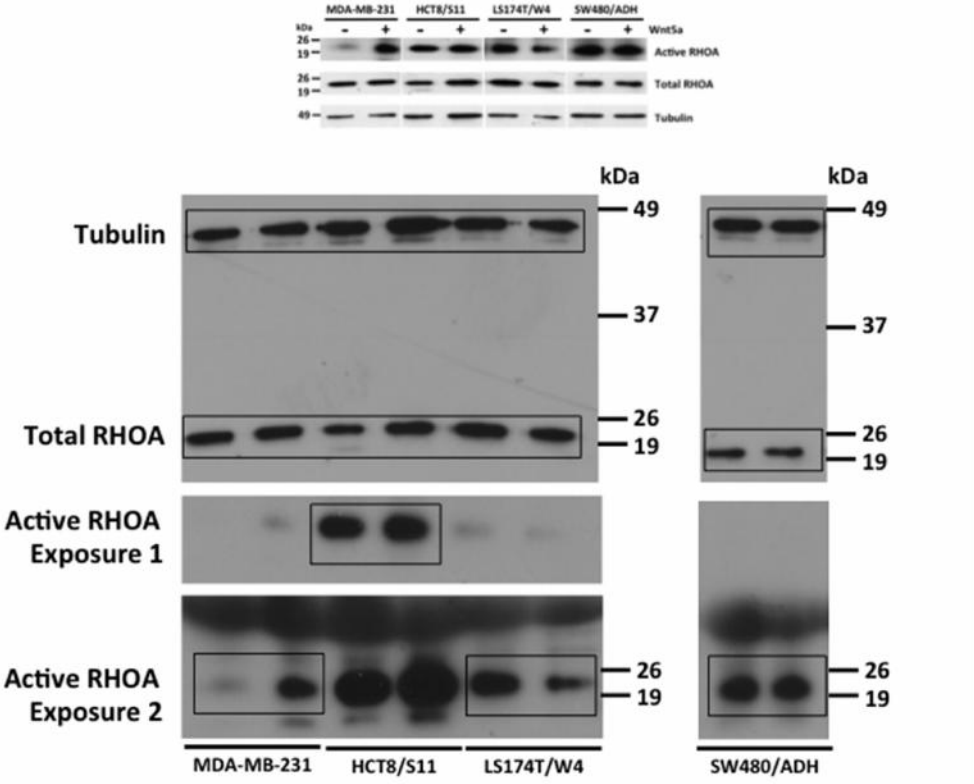


**Supplementary Figure 10:** continued

**Supplementary Figure 6**



**Supplementary Figure 8**



**Supplementary Figure 10:** continued

**Supplementary Table 1: Gene expression changes after Wnt signaling inhibition in LS174T cells and in tumors from control *Apc*$^{min}$ mice and ApcMin mice with forced expression of DN-RhoA.**

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Ascl2 | achaete-scute complex homolog 2 (Drosophila) | 0.03 | 0.83 |
| C2cd4a | C2 calcium-dependent domain containing 4A | 0.07 | 1.19 |
| Asb4 | ankyrin repeat and SOCS box-containing 4 | 0.12 | 0.97 |
| Pnma3 | paraneoplastic antigen MA3 | 0.18 | 0.96 |
| Ephb3 | Eph receptor B3 | 0.18 | 0.93 |
| Smoc2 | SPARC related modular calcium binding 2 | 0.19 | 0.82 |
| Lgr5 | leucine rich repeat containing G protein coupled receptor 5 | 0.20 | 0.98 |
| Cldn2 | claudin 2 | 0.21 | 1.00 |
| Axin2 | axin2 | 0.22 | 1.09 |
| Znrf3 | zinc and ring finger 3 | 0.24 | 1.20 |
| Lrp4 | low density lipoprotein receptor-related protein 4 | 0.25 | 0.98 |
| Slc7a5 | solute carrier family 7 (cationic amino acid transporter, y+ system), member 5 | 0.28 | 1.07 |
| Ets2 | E26 avian leukemia oncogene 2, 3' domain | 0.28 | 0.93 |
| Srek1 | splicing regulatory glutamine/lysine-rich protein 1 | 0.30 | 1.03 |
| Slc12a2 | solute carrier family 12, member 2 | 0.30 | 0.95 |
| Rgmb | RGM domain family, member B | 0.31 | 1.01 |
| Hes6 | hairy and enhancer of split 6 (Drosophila) | 0.31 | 1.10 |
| Epha4 | Eph receptor A4 | 0.31 | 1.05 |
| Myh4 | myosin, heavy polypeptide 4, skeletal muscle | 0.32 | 1.14 |
| Chrnb1 | cholinergic receptor, nicotinic, beta polypeptide 1 (muscle) | 0.33 | 1.12 |
| Hexdc | hexosaminidase (glycosyl hydrolase family 20, catalytic domain) containing | 0.33 | 1.02 |
| Slc5a1 | solute carrier family 5 (sodium/glucose cotransporter), member 1 | 0.34 | 1.02 |
| Id4 | inhibitor of DNA binding 4 | 0.34 | 0.88 |
| Loxl3 | lysyl oxidase-like 3 | 0.34 | 1.10 |
| Il17rb | interleukin 17 receptor B | 0.34 | 1.09 |
| Lrig1 | leucine-rich repeats and immunoglobulin-like domains 1 | 0.34 | 1.01 |
| Ephb2 | Eph receptor B2 | 0.34 | 1.03 |
| Cytip | cytohesin 1 interacting protein | 0.35 | 1.09 |
| Rab15 | RAB15, member RAS oncogene family | 0.35 | 0.99 |
| Hsd11b2 | hydroxysteroid 11-beta dehydrogenase 2 | 0.35 | 0.83 |

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)$^1$ | Fold exp difference in mice tumors (Control/DN-RhoA)$^2$ |
|---|---|---|---|
| Id3 | inhibitor of DNA binding 3 | 0.36 | 0.92 |
| Tmem80 | transmembrane protein 80 | 0.36 | 1.13 |
| Cdca7 | cell division cycle associated 7 | 0.36 | 0.89 |
| Brip1 | BRCA1 interacting protein C-terminal helicase 1 | 0.37 | 0.85 |
| Rnf43 | ring finger protein 43 | 0.37 | 1.10 |
| Cdc25a | cell division cycle 25 homolog A (S. pombe) | 0.37 | 0.92 |
| Smad9 | MAD homolog 9 (Drosophila) | 0.38 | 1.00 |
| Tmem201 | transmembrane protein 201 | 0.39 | 1.04 |
| Ccnf | cyclin F | 0.40 | 1.00 |
| Khk | ketohexokinase | 0.40 | 0.94 |
| Wdr76 | WD repeat domain 76 | 0.40 | 0.88 |
| Slc19a1 | solute carrier family 19 (folate transporter), member 1 | 0.40 | 0.92 |
| Stxbp6 | syntaxin binding protein 6 (amisyn) | 0.40 | 0.95 |
| Rad1 | RAD1 homolog (S. pombe) | 0.40 | 1.06 |
| Tspan5 | tetraspanin 5 | 0.40 | 0.95 |
| Nmt1 | N-myristoyltransferase 1 | 0.41 | 0.87 |
| Cntnap2 | contactin associated protein-like 2 | 0.41 | 0.96 |
| Snhg9 | small nucleolar RNA host gene (non-protein coding) 9 | 0.41 | 1.03 |
| Nsmf | NMDA receptor synaptonuclear signaling and neuronal migration facto | 0.42 | 0.88 |
| Nrtn | neurturin | 0.42 | 1.05 |
| Tcof1 | Treacher Collins Franceschetti syndrome 1, homolog | 0.42 | 1.04 |
| Bgn | biglycan | 0.43 | 0.87 |
| Pold1 | polymerase (DNA directed), delta 1, catalytic subunit | 0.43 | 0.91 |
| Sh3rf3 | SH3 domain containing ring finger 3 | 0.43 | 1.08 |
| Slc3a2 | solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2 | 0.43 | 0.93 |
| Pald1 | phosphatase domain containing, paladin 1 | 0.43 | 1.10 |
| Arhgef26 | Rho guanine nucleotide exchange factor (GEF) 26 | 0.43 | 1.06 |
| Ppan | peter pan homolog (Drosophila) | 0.43 | 1.15 |
| Dhrs2 | dehydrogenase/reductase member 2 | 0.43 | 1.07 |
| Cdt1 | chromatin licensing and DNA replication factor 1 | 0.44 | 0.95 |
| Rad54l | RAD54 like (S. cerevisiae) | 0.44 | 0.94 |
| Bcl11a | B cell CLL/lymphoma 11A (zinc finger protein) | 0.44 | 0.87 |
| Pdzd2 | PDZ domain containing 2 | 0.44 | 0.99 |

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Haus7 | HAUS augmin-like complex, subunit 7 | 0.44 | 0.74 |
| Mcm2 | minichromosome maintenance deficient 2 mitotin (S. cerevisiae) | 0.45 | 0.91 |
| Pdzd8 | PDZ domain containing 8 | 0.45 | 0.90 |
| Mcm5 | minichromosome maintenance deficient 5, cell division cycle 46 (S. cerevisiae) | 0.45 | 0.97 |
| Dtl | denticleless homolog (Drosophila) | 0.45 | 0.95 |
| Lyar | Ly1 antibody reactive clone | 0.45 | 0.86 |
| Klhdc4 | kelch domain containing 4 | 0.46 | 0.89 |
| Pold3 | polymerase (DNA-directed), delta 3, accessory subunit | 0.46 | 0.98 |
| Tcf7 | transcription factor 7, T cell specific | 0.46 | 1.12 |
| Telo2 | TEL2, telomere maintenance 2, homolog (S. cerevisiae) | 0.46 | 0.96 |
| Cbx2 | chromobox homolog 2 (Drosophila Pc class) | 0.46 | 1.10 |
| Them6 | thioesterase superfamily member 6 | 0.46 | 1.13 |
| Exo1 | exonuclease 1 | 0.46 | 1.08 |
| Mcm7 | minichromosome maintenance deficient 7 (S. cerevisiae) | 0.46 | 1.00 |
| Samd1 | sterile alpha motif domain containing 1 | 0.47 | 1.05 |
| Dclre1b | DNA cross-link repair 1B, PSO2 homolog (S. cerevisiae) | 0.47 | 1.02 |
| Aldh1b1 | aldehyde dehydrogenase 1 family, member B1 | 0.47 | 0.84 |
| Eri1 | exoribonuclease 1 | 0.47 | 0.98 |
| Haus8 | 4HAUS augmin-like complex, subunit 8 | 0.47 | 1.02 |
| Hells | helicase, lymphoid specific | 0.47 | 0.95 |
| Fkbp4 | FK506 binding protein 4 | 0.48 | 0.85 |
| Tmem97 | transmembrane protein 97 | 0.48 | 0.93 |
| Mcm3 | minichromosome maintenance deficient 3 (S. cerevisiae) | 0.48 | 0.87 |
| Slc1a4 | solute carrier family 1 (glutamate/neutral amino acid transporter), member 4 | 0.48 | 1.03 |
| Plekha2 | pleckstrin homology domain-containing, family A (phosphoinositide binding | 0.48 | 0.92 |
| Myo19 | myosin XIX | 0.48 | 1.02 |
| Uhrf1 | ubiquitin-like, containing PHD and RING finger domains, 1 | 0.48 | 0.83 |
| Edar | ectodysplasin-A receptor | 0.48 | 1.25 |
| Gins2 | GINS complex subunit 2 (Psf2 homolog) | 0.48 | 0.86 |
| G3bp1 | Ras-GTPase-activating protein SH3-domain binding protein 1 | 0.48 | 0.94 |
| Msh6 | mutS homolog 6 (E. coli) | 0.48 | 0.80 |
| Rfc4 | replication factor C (activator 1) 4 | 0.49 | 1.00 |
| Nasp | nuclear autoantigenic sperm protein (histone-binding) | 0.49 | 1.05 |

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Gpatch4 | G patch domain containing 4 | 0.49 | 0.92 |
| Maneal | mannosidase, endo-alpha-like | 0.49 | 1.00 |
| Tyms | thymidylate synthase | 0.49 | 0.99 |
| Slc25a19 | solute carrier family 25 (mitochondrial thiamine pyrophosphate carrier), member 19 | 0.49 | 0.97 |
| Slc39a3 | solute carrier family 39 (zinc transporter), member 3 | 0.49 | 0.95 |
| Timeless | timeless homolog (Drosophila) | 0.50 | 1.04 |
| Ccpg1 | cell cycle progression 1 | 2.00 | 0.94 |
| Actn4 | actinin alpha 4 | 2.01 | 0.92 |
| Nucb2 | nucleobindin 2 | 2.01 | 0.84 |
| Enpp5 | ectonucleotide pyrophosphatase/phosphodiesterase 5 | 2.01 | 1.22 |
| Elmod2 | ELMO domain containing 2 | 2.02 | 0.92 |
| Rab4b | RAB4B, member RAS oncogene family | 2.02 | 0.93 |
| S100a11 | S100 calcium binding protein A11 (calgizzarin) | 2.03 | 0.95 |
| Ncoa3 | nuclear receptor coactivator 3 | 2.03 | 1.02 |
| Anxa3 | annexin A3 | 2.06 | 0.68 |
| Il1r2 | interleukin 1 receptor, type II | 2.10 | 0.97 |
| Ccnyl1 | cyclin Y-like 1 | 2.10 | 0.78 |
| Klf9 | Kruppel-like factor 9 | 2.10 | 0.93 |
| Nr3c2 | nuclear receptor subfamily 3, group C, member 2 | 2.10 | 1.04 |
| Gramd1b | GRAM domain containing 1B | 2.11 | 1.08 |
| Wdfy3 | WD repeat and FYVE domain containing 3 | 2.12 | 1.12 |
| Lig4 | ligase IV, DNA, ATP-dependent | 2.13 | 1.04 |
| Mical2 | microtubule associated monoxygenase, calponin and LIM domain containing 2 | 2.13 | 0.96 |
| Slc37a1 | solute carrier family 37 (glycerol-3-phosphate transporter), member 1 | 2.14 | 0.97 |
| Irs1 | insulin receptor substrate 1 | 2.15 | 1.00 |
| Edem1 | ER degradation enhancer, mannosidase alpha-like 1 | 2.15 | 0.83 |
| Ceacam5 | carcinoembryonic antigen-related cell adhesion molecule 5 | 2.18 | 1.02 |
| Antxr2 | anthrax toxin receptor 2 | 2.18 | 0.95 |
| Spink4 | serine peptidase inhibitor, Kazal type 4 | 2.20 | 0.85 |
| Tmc4 | transmembrane channel-like gene family 4 | 2.21 | 1.02 |
| Dnajb4 | DnaJ (Hsp40) homolog, subfamily B, member 4 | 2.25 | 0.93 |
| Plat | plasminogen activator, tissue | 2.26 | 1.13 |
| Myof | myoferlin | 2.28 | 0.93 |

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Ehd1 | EH-domain containing 1 | 2.28 | 0.88 |
| Cpeb3 | cytoplasmic polyadenylation element binding protein 3 | 2.28 | 0.98 |
| Kcnk5 | potassium channel, subfamily K, member 5 | 2.29 | 0.74 |
| Kdelr3 | KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 3 | 2.30 | 0.92 |
| Xdh | xanthine dehydrogenase | 2.30 | 1.00 |
| Sqstm1 | sequestosome 1 | 2.32 | 0.90 |
| Ptprr | protein tyrosine phosphatase, receptor type, R | 2.33 | 1.05 |
| Tmem198b | transmembrane protein 198b | 2.34 | 1.11 |
| Acbd4 | acyl-Coenzyme A binding domain containing 4 | 2.34 | 1.03 |
| Efnb2 | ephrin B2 | 2.36 | 1.05 |
| Kifap3 | kinesin-associated protein 3 | 2.36 | 1.06 |
| Glrx | glutaredoxin | 2.37 | 0.80 |
| Agr3 | anterior gradient homolog 3 (Xenopus laevis) | 2.38 | 1.19 |
| Krcc1 | lysine-rich coiled-coil 1 | 2.39 | 0.96 |
| Gjb1 | gap junction protein, beta 1 | 2.42 | 0.83 |
| Prr15l | proline rich 15-like | 2.42 | 1.00 |
| Pag1 | phosphoprotein associated with glycosphingolipid microdomains 1 | 2.43 | 1.09 |
| Mtm1 | X-linked myotubular myopathy gene 1 | 2.44 | 0.98 |
| Galnt5 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosam | 2.44 | 0.88 |
| Arfgap3 | ADP-ribosylation factor GTPase activating protein 3 | 2.44 | 0.94 |
| Fam214a | family with sequence similarity 214, member A | 2.45 | 0.94 |
| Trnp1 | TMF1-regulated nuclear protein 1 | 2.45 | 0.98 |
| Best2 | bestrophin 2 | 2.46 | 0.98 |
| Capg | capping protein (actin filament), gelsolin-like | 2.46 | 0.78 |
| Sult1a1 | sulfotransferase family 1A, phenol-preferring, member 1 | 2.50 | 1.10 |
| Odf2l | outer dense fiber of sperm tails 2-like | 2.52 | 0.76 |
| Smim14 | small integral membrane protein 14 | 2.52 | 0.91 |
| Gskip | GSK3B interacting protein | 2.54 | 0.74 |
| Opn3 | opsin 3 | 2.54 | 0.94 |
| Ddx60 | DEAD (Asp-Glu-Ala-Asp) box polypeptide 60 | 2.57 | 0.88 |
| Neat1 | nuclear paraspeckle assembly transcript 1 (non-protein coding) | 2.61 | 0.96 |
| Casp1 | caspase 1 | 2.61 | 0.86 |
| Dusp4 | dual specificity phosphatase 4 | 2.67 | 1.01 |

Supplmentary Table 1

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Irf9 | interferon regulatory factor 9 | 2.69 | 1.09 |
| Nt5e | 5' nucleotidase, ecto | 2.72 | 0.97 |
| Garem | GRB2 associated, regulator of MAPK1 | 2.76 | 0.96 |
| Asph | aspartate-beta-hydroxylase | 2.76 | 1.02 |
| Pbx1 | pre B cell leukemia homeobox 1 | 2.76 | 0.98 |
| Tmem139 | transmembrane protein 139 | 2.76 | 0.95 |
| Atl1 | atlastin GTPase 1 | 2.77 | 0.95 |
| Shroom3 | shroom family member 3 | 2.82 | 0.92 |
| Tob1 | transducer of ErbB-2.1 | 2.83 | 0.97 |
| Cited2 | Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2 | 2.83 | 0.86 |
| Cda | cytidine deaminase | 2.84 | 0.82 |
| Bhlhe41 | basic helix-loop-helix family, member e41 | 2.87 | 1.02 |
| Higd1a | HIG1 domain family, member 1A | 2.87 | 0.95 |
| Flnb | filamin, beta | 2.89 | 0.87 |
| Slc7a7 | solute carrier family 7 (cationic amino acid transporter, y+ system), member 7 | 2.90 | 0.94 |
| Reg4 | regenerating islet-derived family, member 4 | 2.91 | 0.97 |
| Rab27b | RAB27b, member RAS oncogene family | 2.93 | 0.90 |
| Agr2 | anterior gradient 2 (Xenopus laevis) | 2.94 | 0.90 |
| Bcl3 | B cell leukemia/lymphoma 3 | 2.94 | 1.05 |
| Mlph | melanophilin | 2.97 | 0.93 |
| Ifit2 | interferon-induced protein with tetratricopeptide repeats 2 | 2.98 | 1.06 |
| Flrt3 | fibronectin leucine rich transmembrane protein 3 | 2.98 | 0.90 |
| Krt19 | keratin 19 | 2.99 | 0.84 |
| Pdzk1ip1 | PDZK1 interacting protein 1 | 2.99 | 1.02 |
| Eif4ebp2 | eukaryotic translation initiation factor 4E binding protein 2 | 3.00 | 1.07 |
| Tff3 | trefoil factor 3, intestinal | 3.01 | 0.81 |
| Abat | 4-aminobutyrate aminotransferase | 3.06 | 0.90 |
| Fam114a1 | family with sequence similarity 114, member A1 | 3.06 | 0.97 |
| Mvp | major vault protein | 3.08 | 0.78 |
| Ifit1 | interferon-induced protein with tetratricopeptide repeats 1 | 3.09 | 1.14 |
| Dnajb9 | DnaJ (Hsp40) homolog, subfamily B, member 9 | 3.09 | 1.07 |
| Plaur | plasminogen activator, urokinase receptor | 3.11 | 0.72 |
| Acsf2 | acyl-CoA synthetase family member 2 | 3.14 | 0.88 |

# Supplmentary Table 1

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Lama3 | laminin, alpha 3 | 3.14 | 0.75 |
| Gprc5a | G protein-coupled receptor, family C, group 5, member A | 3.14 | 0.77 |
| Hbegf | heparin-binding EGF-like growth factor | 3.15 | 1.01 |
| Pdlim2 | PDZ and LIM domain 2 | 3.15 | 0.82 |
| Mob3b | MOB kinase activator 3B | 3.16 | 0.98 |
| Zfp36 | zinc finger protein 36 | 3.22 | 1.16 |
| Rras | Harvey rat sarcoma oncogene, subgroup R | 3.24 | 0.99 |
| Dhrs3 | dehydrogenase/reductase (SDR family) member 3 | 3.26 | 1.04 |
| Prrg1 | proline rich Gla (G-carboxyglutamic acid) 1 | 3.29 | 1.02 |
| Styk1 | serine/threonine/tyrosine kinase 1 | 3.32 | 0.98 |
| Mical1 | microtubule associated monoxygenase, calponin and LIM domain containing 1 | 3.36 | 1.02 |
| Abp1 | amiloride binding protein 1 (amine oxidase, copper-containing) | 3.40 | 1.04 |
| Fndc3b | fibronectin type III domain containing 3B | 3.41 | 0.91 |
| Pla2g10 | phospholipase A2, group X | 3.44 | 0.94 |
| Bcar3 | breast cancer anti-estrogen resistance 3 | 3.45 | 1.02 |
| Gjb5 | gap junction protein, beta 5 | 3.49 | 1.17 |
| Rnf19a | ring finger protein 19A | 3.53 | 0.92 |
| Trim31 | tripartite motif-containing 31 | 3.55 | 0.89 |
| Sult1c2 | sulfotransferase family, cytosolic, 1C, member 2 | 3.56 | 1.09 |
| Rin2 | Ras and Rab interactor 2 | 3.63 | 1.09 |
| Rab37 | RAB37, member of RAS oncogene family | 3.67 | 0.97 |
| Selm | selenoprotein M | 3.71 | 0.79 |
| Itgb6 | integrin beta 6 | 3.71 | 0.89 |
| Fabp1 | fatty acid binding protein 1, liver | 3.81 | 1.30 |
| Akr1b10 | aldo-keto reductase family 1, member B10 (aldose reductase) | 3.85 | 1.03 |
| Sfta2 | surfactant associated 2 | 3.87 | 1.00 |
| Slc22a18 | solute carrier family 22 (organic cation transporter), member 18 | 3.89 | 0.98 |
| Frmd4b | FERM domain containing 4B | 3.90 | 1.02 |
| Klf6 | Kruppel-like factor 6 | 3.94 | 0.99 |
| Pkib | protein kinase inhibitor beta, cAMP dependent, testis specific | 4.04 | 1.09 |
| Ahnak | AHNAK nucleoprotein (desmoyokin) | 4.07 | 0.91 |
| Atp9b | ATPase, class II, type 9B | 4.11 | 0.80 |
| Spdef | SAM pointed domain containing ets transcription factor | 4.20 | 0.86 |

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Fos | FBJ osteosarcoma oncogene | 4.21 | 1.09 |
| Slc44a4 | solute carrier family 44, member 4 | 4.22 | 0.91 |
| Optn | optineurin | 4.23 | 1.03 |
| B3galt4 | UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, polypeptide 4 | 4.26 | 0.87 |
| Bdkrb1 | bradykinin receptor, beta 1 | 4.27 | 1.06 |
| Arhgdib | Rho, GDP dissociation inhibitor (GDI) beta | 4.30 | 1.01 |
| Klf2 | Kruppel-like factor 2 (lung) | 4.33 | 0.84 |
| Muc2 | mucin 2 | 4.38 | 0.80 |
| Cebpd | CCAAT/enhancer binding protein (C/EBP), delta | 4.38 | 1.04 |
| Hmgcs2 | 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2 | 4.39 | 0.83 |
| Plscr4 | phospholipid scramblase 4 | 4.42 | 1.01 |
| Slpi | secretory leukocyte peptidase inhibitor | 4.44 | 0.81 |
| Cd200r1 | CD200 receptor 1 | 4.44 | 1.11 |
| Pold4 | polymerase (DNA-directed), delta 4 | 4.45 | 0.95 |
| Fxyd3 | FXYD domain-containing ion transport regulator 3 | 4.45 | 1.12 |
| Clic3 | chloride intracellular channel 3 | 4.49 | 0.89 |
| Ptk6 | PTK6 protein tyrosine kinase 6 | 4.52 | 0.70 |
| Abcc3 | ATP-binding cassette, sub-family C (CFTR/MRP), member 3 | 4.84 | 0.89 |
| Mir22hg | Mir22 host gene (non-protein coding) | 4.91 | 0.85 |
| Lgals4 | lectin, galactose binding, soluble 4 | 4.92 | 0.87 |
| Tnnc1 | troponin C, cardiac/slow skeletal | 4.93 | 1.10 |
| Mpl | myeloproliferative leukemia virus oncogene | 4.95 | 0.95 |
| Coro2a | coronin, actin binding protein 2A | 4.97 | 0.90 |
| Capn8 | calpain 8 | 5.31 | 0.79 |
| Klf4 | Kruppel-like factor 4 (gut) | 5.35 | 0.81 |
| Ifit3 | interferon-induced protein with tetratricopeptide repeats 3 | 5.36 | 0.93 |
| Rgs2 | regulator of G-protein signaling 2 | 5.38 | 0.90 |
| Lamb3 | laminin, beta 3 | 5.59 | 0.75 |
| Cldn4 | claudin 4 | 5.61 | 0.85 |
| Ceacam1 | carcinoembryonic antigen-related cell adhesion molecule 1 | 5.86 | 0.75 |
| Myo7b | myosin VIIB | 5.98 | 0.85 |
| Ankle2 | ankyrin repeat and LEM domain containing 2 | 6.02 | 0.81 |
| Ldhd | lactate dehydrogenase D | 6.11 | 0.99 |

Supplmentary Table 1

| Row Labels | Name | Fold exp difference in LS174T cells (Control/DN-TCF4)[1] | Fold exp difference in mice tumors (Control/DN-RhoA)[2] |
|---|---|---|---|
| Aldh3b1 | aldehyde dehydrogenase 3 family, member B1 | 6.36 | 0.88 |
| Hyal1 | hyaluronoglucosaminidase 1 | 6.51 | 0.79 |
| Vill | villin-like | 6.84 | 1.07 |
| Capn5 | calpain 5 | 6.84 | 0.98 |
| Dpcr1 | diffuse panbronchiolitis critical region 1 (human) | 6.86 | 0.89 |
| Rarres1 | retinoic acid receptor responder (tazarotene induced) 1 | 7.12 | 0.92 |
| Arl14 | ADP-ribosylation factor-like 14 | 7.15 | 0.88 |
| Sema3b | sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (se | 7.20 | 1.14 |
| Plac8 | placenta-specific 8 | 7.24 | 1.02 |
| Liph | lipase, member H | 7.32 | 0.87 |
| Elf3 | E74-like factor 3 | 7.35 | 1.00 |
| Krt7 | keratin 7 | 7.50 | 0.98 |
| Tspan1 | tetraspanin 1 | 7.74 | 0.74 |
| Erp27 | endoplasmic reticulum protein 27 | 7.77 | 1.03 |
| Frmd3 | FERM domain containing 3 | 7.86 | 1.07 |
| Hpgd | hydroxyprostaglandin dehydrogenase 15 (NAD) | 7.97 | 0.88 |
| S100a1 | S100 calcium binding protein A1 | 8.44 | 0.86 |
| Lbh | limb-bud and heart | 8.99 | 1.10 |
| Slc25a45 | solute carrier family 25, member 45 | 9.46 | 0.91 |
| Dhrs9 | dehydrogenase/reductase (SDR family) member 9 | 9.54 | 0.83 |

[1] Fold expression differences between untreated and Doxycycline-treated LS174T-dnTCF4 cells for the 281 genes with >2-fold difference in exp
$p<0.05$ (GEO ID: GDS4386)

[2] Fold expression differences in tumors from $Apc^{min}$ control mice and $Apc^{min}$ mice with DN-RhoA expression for the set of 281 genes regulated by Wnt in LS

**Supplementary Table 2: List of 1,268 showeing significant expression difference in the tumors from control and DN-RhoA mice.**

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17403864 | Mir186 | microRNA 186 | 8.96 | 7.54 | 16.50 | 43.34 | 3.63 |
| 17372970 | Olfr1265 | olfactory receptor 1265 | 12.54 | 7.40 | 12.87 | 44.02 | 2.85 |
| 17410828 | | | 24.33 | 12.70 | 78.15 | 20.39 | 2.66 |
| 17505740 | | | 11.70 | 14.90 | 35.38 | 26.50 | 2.33 |
| 17379104 | | | 37.37 | 22.00 | 70.74 | 65.05 | 2.29 |
| 17384657 | Mir5128 | microRNA 5128 | 13.52 | 16.47 | 27.66 | 39.95 | 2.25 |
| 17449710 | Cxcl9 | chemokine (C-X-C motif) ligand 9 | 19.50 | 20.16 | 30.01 | 57.57 | 2.21 |
| 17406454 | | | 20.56 | 22.23 | 45.96 | 47.42 | 2.18 |
| 17410773 | | | 9.77 | 16.78 | 26.62 | 29.76 | 2.12 |
| 17530501 | | | 8.47 | 10.28 | 27.81 | 11.81 | 2.11 |
| 17466936 | | | 6.44 | 7.28 | 22.28 | 6.57 | 2.10 |
| 17233226 | Lilrb4 | leukocyte immunoglobulin-like receptor, subfamily B, member 4 | 12.53 | 10.99 | 16.69 | 32.33 | 2.08 |
| 17507306 | | | 16.82 | 13.35 | 32.58 | 29.28 | 2.05 |
| 17526657 | | | 9.78 | 6.67 | 8.22 | 25.28 | 2.04 |
| 17424088 | Mir5123 | microRNA 5123 | 104.45 | 140.24 | 263.95 | 221.59 | 1.98 |
| 17238860 | | | 37.32 | 28.26 | 78.14 | 51.00 | 1.97 |
| 17470829 | Grcc10 | gene rich cluster, C10 gene | 13.11 | 9.86 | 18.41 | 25.52 | 1.91 |
| 17397331 | | | 44.82 | 52.38 | 79.60 | 105.62 | 1.91 |
| 17548808 | Gpc3 | glypican 3 | 50.85 | 83.01 | 206.70 | 47.61 | 1.90 |
| 17412121 | | | 5.11 | 5.48 | 6.01 | 13.97 | 1.89 |
| 17312686 | Apol9b | apolipoprotein L 9b | 23.31 | 21.24 | 26.72 | 57.35 | 1.89 |
| 17379126 | | | 54.25 | 24.36 | 70.53 | 76.40 | 1.87 |
| 17366151 | | | 15.20 | 10.45 | 37.34 | 10.33 | 1.86 |
| 17293704 | | | 6.16 | 5.70 | 9.77 | 12.25 | 1.85 |
| 17472233 | | | 9.05 | 9.16 | 11.73 | 22.02 | 1.85 |
| 17313037 | n-R5s40 | nuclear encoded rRNA 5S 40 | 19.01 | 26.02 | 40.43 | 42.92 | 1.85 |
| 17326700 | Mir99a | microRNA 99a | 7.82 | 7.58 | 8.52 | 19.69 | 1.83 |
| 17451943 | Gm16065 | predicted gene 16065 | 28.79 | 23.17 | 71.98 | 22.87 | 1.83 |
| 17370483 | Mir181a-2 | microRNA 181a-2 | 106.32 | 73.31 | 187.73 | 138.90 | 1.82 |
| 17238858 | | | 31.55 | 34.61 | 48.18 | 71.51 | 1.81 |
| 17527164 | | | 13.68 | 26.76 | 29.24 | 42.83 | 1.78 |
| 17491014 | | | 7.31 | 7.10 | 9.05 | 16.44 | 1.77 |
| 17300145 | Traj54 | T cell receptor alpha joining 54 | 323.10 | 140.92 | 467.22 | 352.38 | 1.77 |
| 17288105 | Mir23b | microRNA 23b | 14.87 | 12.90 | 28.31 | 20.63 | 1.76 |
| 17502421 | | | 4.61 | 6.93 | 7.22 | 13.04 | 1.76 |
| 17221371 | | | 19.39 | 11.60 | 15.69 | 38.71 | 1.75 |
| 17300153 | Traj50 | T cell receptor alpha joining 50 | 281.19 | 185.41 | 412.44 | 405.57 | 1.75 |
| 17503118 | Mir27a | microRNA 27a | 80.56 | 55.61 | 140.18 | 98.14 | 1.75 |
| 17459377 | | | 12.82 | 27.09 | 10.42 | 59.26 | 1.75 |
| 17457773 | Tcrb-J | T cell receptor beta, joining region | 15.45 | 12.50 | 26.00 | 22.67 | 1.74 |
| 17248890 | Gnb2l1 | guanine nucleotide binding protein (G protein), beta polypeptide 2 like 1 | 94.53 | 96.03 | 193.06 | 138.72 | 1.74 |
| 17470623 | Gm5316 | predicted gene 5316 | 11.02 | 10.59 | 21.76 | 15.55 | 1.73 |
| 17372742 | | | 615.12 | 350.45 | 879.87 | 773.58 | 1.71 |
| 17547732 | Exoc2 | exocyst complex component 2 | 23.70 | 15.76 | 34.46 | 32.92 | 1.71 |
| 17291193 | | | 16.51 | 12.22 | 28.09 | 20.80 | 1.70 |
| 17306360 | | | 68.51 | 32.14 | 79.67 | 91.26 | 1.70 |
| 17309262 | | | 153.77 | 157.52 | 251.57 | 276.53 | 1.70 |
| 17490090 | Vmn2r62 | vomeronasal 2, receptor 62 | 7.46 | 7.69 | 12.20 | 13.43 | 1.69 |
| 17410433 | | | 8.47 | 7.38 | 11.72 | 15.01 | 1.69 |
| 17395189 | Gm14393 | predicted gene 14393 | 14.61 | 16.73 | 35.59 | 17.11 | 1.68 |
| 17530033 | Esyt3 | extended synaptotagmin-like protein 3 | 50.97 | 40.08 | 82.88 | 69.74 | 1.68 |
| 17266901 | | | 18.08 | 6.07 | 9.19 | 31.15 | 1.67 |
| 17540092 | Ssxb2 | synovial sarcoma, X member B, breakpoint 2 | 9.60 | 11.69 | 12.30 | 23.06 | 1.66 |
| 17317799 | | | 9.62 | 6.77 | 14.24 | 12.76 | 1.65 |
| 17378168 | Bpifb5 | BPI fold containing family B, member 5 | 226.86 | 141.42 | 344.26 | 261.60 | 1.65 |
| 17352573 | | | 21.68 | 18.01 | 43.47 | 21.55 | 1.64 |
| 17221286 | | | 982.76 | 546.38 | 1323.00 | 1177.08 | 1.63 |
| 17287294 | | | 49.83 | 25.90 | 58.97 | 64.35 | 1.63 |
| 17408088 | Rpl21-ps11 | ribosomal protein L21, pseudogene 11 | 11.93 | 12.73 | 19.78 | 20.33 | 1.63 |
| 17309366 | | | 8.65 | 7.73 | 13.98 | 12.64 | 1.63 |
| 17334302 | 2610019E17Rik | RIKEN cDNA 2610019E17 gene | 13.18 | 18.41 | 23.00 | 28.31 | 1.62 |
| 17523190 | Snora62 | small nucleolar RNA, H/ACA box 62 | 40.07 | 41.92 | 57.56 | 75.64 | 1.62 |
| 17394063 | Ada | adenosine deaminase | 58.12 | 56.83 | 67.15 | 119.44 | 1.62 |
| 17546232 | Zf12 | Zf12 pseudogene | 32.60 | 30.80 | 42.40 | 60.47 | 1.62 |
| 17424452 | Gm2023 | predicted gene 2023 | 11.01 | 11.29 | 13.93 | 22.19 | 1.62 |
| 17248894 | Gnb2l1 | guanine nucleotide binding protein (G protein), beta polypeptide 2 like 1 | 76.07 | 43.59 | 95.91 | 97.55 | 1.62 |
| 17289584 | Cenpk | centromere protein K | 11.44 | 11.50 | 15.34 | 21.70 | 1.61 |
| 17239872 | | | 7.60 | 6.11 | 11.37 | 10.67 | 1.61 |
| 17277756 | | | 22.68 | 16.88 | 30.81 | 32.75 | 1.61 |
| 17342595 | Nme4 | NME/NM23 nucleoside diphosphate kinase 4 | 50.38 | 46.69 | 100.78 | 54.22 | 1.60 |
| 17406323 | Mnd1 | meiotic nuclear divisions 1 homolog (S. cerevisiae) | 10.49 | 7.86 | 20.99 | 8.30 | 1.60 |
| 17291057 | Hist1h2ag | histone cluster 1, H2ag | 38.31 | 80.70 | 92.06 | 97.68 | 1.59 |
| 17266617 | | | 6.31 | 6.21 | 11.61 | 8.28 | 1.59 |
| 17232189 | Taar7d | trace amine-associated receptor 7D | 14.49 | 13.76 | 29.58 | 15.18 | 1.58 |
| 17224682 | | | 18.78 | 15.66 | 35.29 | 19.19 | 1.58 |
| 17516030 | Tmem218 | transmembrane protein 218 | 34.23 | 26.79 | 49.63 | 46.89 | 1.58 |
| 17424090 | | | 106.05 | 141.08 | 193.56 | 196.65 | 1.58 |
| 17439813 | | | 18.66 | 58.90 | 78.65 | 43.75 | 1.58 |
| 17465156 | | | 14.50 | 15.51 | 23.61 | 23.60 | 1.57 |
| 17320811 | | | 520.70 | 249.99 | 606.69 | 602.27 | 1.57 |
| 17326640 | Rbm11 | RNA binding motif protein 11 | 26.92 | 21.04 | 35.64 | 39.44 | 1.57 |
| 17243523 | | | 13.47 | 11.55 | 19.36 | 19.74 | 1.56 |
| 17513769 | | | 32.83 | 14.26 | 34.37 | 39.17 | 1.56 |
| 17446524 | Speer4b | spermatogenesis associated glutamate (E)-rich protein 4b | 7.91 | 8.11 | 17.42 | 7.59 | 1.56 |
| 17437801 | | | 35.97 | 19.96 | 29.96 | 57.34 | 1.56 |

# Supplementary Table 2

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17366892 | | | 12.77 | 7.84 | 20.53 | 11.57 | 1.56 |
| 17398266 | Mir16-2 | microRNA 16-2 | 25.26 | 11.76 | 29.29 | 28.28 | 1.56 |
| 17249700 | 3230401D17Rik | RIKEN cDNA 3230401D17 gene | 34.87 | 52.32 | 70.87 | 64.63 | 1.55 |
| 17492327 | | | 17.98 | 19.23 | 33.13 | 24.70 | 1.55 |
| 17337614 | Olfr127 | olfactory receptor 127 | 7.20 | 8.46 | 13.61 | 10.71 | 1.55 |
| 17504372 | 1700047G07Rik | RIKEN cDNA 1700047G07 gene | 27.96 | 20.72 | 31.98 | 43.58 | 1.55 |
| 17214907 | Gm16025 | predicted gene 16025 | 16.21 | 12.80 | 25.01 | 20.00 | 1.55 |
| 17517346 | Gm16124 | predicted gene 16124 | 12.28 | 13.19 | 17.59 | 21.84 | 1.55 |
| 17411319 | Rabggtb | RAB geranylgeranyl transferase, b subunit | 13.38 | 8.13 | 16.36 | 16.93 | 1.55 |
| 17268846 | Gm12356 | predicted gene 12356 | 14.42 | 14.54 | 26.77 | 18.01 | 1.55 |
| 17223828 | Cryge | crystallin, gamma E | 4.95 | 5.73 | 10.18 | 6.33 | 1.55 |
| 17221071 | Sox17 | SRY-box containing gene 17 | 110.32 | 131.03 | 244.02 | 128.54 | 1.54 |
| 17273280 | Stra13 | stimulated by retinoic acid 13 | 87.55 | 80.77 | 169.08 | 89.94 | 1.54 |
| 17334126 | D930048G16Rik | RIKEN cDNA D930048G16 gene | 20.97 | 17.83 | 31.34 | 28.32 | 1.54 |
| 17421222 | Gm13083 | predicted gene 13083 | 16.92 | 11.06 | 21.15 | 21.87 | 1.54 |
| 17219895 | | | 5.46 | 5.44 | 6.65 | 10.06 | 1.53 |
| 17499111 | | | 89.98 | 67.41 | 96.39 | 144.53 | 1.53 |
| 17217169 | Mir135b | microRNA 135b | 10.32 | 13.76 | 17.47 | 19.30 | 1.53 |
| 17261169 | | | 6.83 | 6.84 | 8.95 | 11.92 | 1.53 |
| 17349174 | Polr2d | polymerase (RNA) II (DNA directed) polypeptide D | 36.07 | 42.66 | 60.02 | 59.99 | 1.52 |
| 17518933 | 9530091C08Rik | RIKEN cDNA 9530091C08 gene | 16.58 | 19.20 | 26.89 | 27.53 | 1.52 |
| 17491315 | Mrgpra9 | MAS-related GPR, member A9 | 14.91 | 7.64 | 19.76 | 14.51 | 1.52 |
| 17294682 | Mef2c | myocyte enhancer factor 2C | 21.77 | 20.30 | 24.51 | 39.37 | 1.52 |
| 17294803 | | | 32.79 | 18.47 | 31.13 | 46.69 | 1.52 |
| 17486505 | | | 12.46 | 12.58 | 14.10 | 23.90 | 1.52 |
| 17318734 | Zfp647 | zinc finger protein 647 | 19.57 | 16.07 | 30.74 | 23.33 | 1.52 |
| 17236525 | Mir1931 | microRNA 1931 | 13.78 | 10.96 | 15.64 | 21.86 | 1.52 |
| 17330963 | | | 5.37 | 6.01 | 6.66 | 10.56 | 1.51 |
| 17399876 | Sprr2f | small proline-rich protein 2F | 10.13 | 8.99 | 18.24 | 10.69 | 1.51 |
| 17369717 | Prrc2b | proline-rich coiled-coil 2B | 53.20 | 64.02 | 96.50 | 80.60 | 1.51 |
| 17369719 | | | 53.20 | 64.02 | 96.50 | 80.60 | 1.51 |
| 17290913 | Gpx5 | glutathione peroxidase 5 | 22.35 | 27.27 | 54.84 | 20.10 | 1.51 |
| 17532623 | mt-Tr | mitochondrially encoded tRNA arginine | 10.54 | 9.27 | 13.93 | 15.89 | 1.51 |
| 17378896 | | | 57.20 | 80.87 | 112.48 | 95.31 | 1.50 |
| 17540127 | | | 24.77 | 21.34 | 31.88 | 37.49 | 1.50 |
| 17487572 | Vmn1r127 | vomeronasal 1 receptor 127 | 13.64 | 10.72 | 20.23 | 16.37 | 1.50 |
| 17545756 | Gm15241 | predicted gene 15241 | 13.25 | 10.32 | 23.67 | 11.58 | 1.49 |
| 17512691 | Pdf | peptide deformylase (mitochondrial) | 8.15 | 8.69 | 12.20 | 12.98 | 1.49 |
| 17331880 | Krtap19-9a | keratin associated protein 19-9A | 5.02 | 5.57 | 6.59 | 9.20 | 1.49 |
| 17364187 | | | 24.26 | 36.58 | 31.42 | 59.37 | 1.49 |
| 17403106 | Adh6b | alcohol dehydrogenase 6B (class V) | 9.27 | 8.07 | 11.68 | 14.19 | 1.49 |
| 17270615 | | | 39.68 | 45.18 | 67.64 | 58.91 | 1.49 |
| 17489705 | | | 16.46 | 9.38 | 25.57 | 12.92 | 1.49 |
| 17249034 | | | 779.86 | 395.05 | 848.41 | 900.99 | 1.49 |
| 17294130 | A530095I07Rik | RIKEN cDNA A530095I07 gene | 13.18 | 14.71 | 14.84 | 26.61 | 1.49 |
| 17216127 | | | 9.94 | 9.80 | 17.75 | 11.56 | 1.49 |
| 17503942 | Mt1 | metallothionein 1 | 310.46 | 397.65 | 576.46 | 472.78 | 1.48 |
| 17519345 | | | 22.42 | 21.33 | 40.44 | 24.32 | 1.48 |
| 17309372 | | | 6.23 | 6.13 | 9.31 | 8.99 | 1.48 |
| 17420011 | Gm13008 | predicted gene 13008 | 21.95 | 19.90 | 13.57 | 48.33 | 1.48 |
| 17495027 | | | 16.84 | 16.19 | 23.19 | 25.61 | 1.48 |
| 17547020 | Gm20770 | predicted gene, 20770 | 9.77 | 8.44 | 15.86 | 11.04 | 1.48 |
| 17455787 | Gngt1 | guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1 | 6.40 | 6.18 | 10.29 | 8.30 | 1.48 |
| 17523186 | | | 37.51 | 18.98 | 40.51 | 42.88 | 1.48 |
| 17306753 | Ipo4 | importin 4 | 46.43 | 30.45 | 51.49 | 61.97 | 1.48 |
| 17300027 | | | 29.50 | 29.63 | 45.10 | 42.12 | 1.48 |
| 17317391 | | | 8.03 | 7.33 | 9.08 | 13.55 | 1.47 |
| 17290601 | Gm2444 | predicted gene 2444 | 9.42 | 6.93 | 14.03 | 10.04 | 1.47 |
| 17407489 | Lce3a | late cornified envelope 3A | 117.95 | 87.14 | 137.20 | 164.71 | 1.47 |
| 17366884 | | | 53.24 | 49.28 | 79.04 | 71.64 | 1.47 |
| 17422659 | B930041F14Rik | RIKEN cDNA B930041F14 gene | 26.36 | 26.80 | 45.91 | 32.21 | 1.47 |
| 17280191 | Gm20535 | predicted gene 20535 | 30.24 | 32.61 | 49.26 | 43.07 | 1.47 |
| 17474744 | Vmn1r116 | vomeronasal 1 receptor 116 | 9.25 | 8.76 | 10.78 | 15.66 | 1.47 |
| 17411489 | Vmn1r2 | vomeronasal 1 receptor 2 | 136.24 | 100.69 | 179.82 | 168.07 | 1.47 |
| 17300221 | Traj15 | T cell receptor alpha joining 15 | 10.49 | 15.23 | 24.81 | 12.95 | 1.47 |
| 17476902 | | | 6.35 | 6.95 | 12.84 | 6.66 | 1.47 |
| 17507904 | | | 151.09 | 111.48 | 210.53 | 174.32 | 1.47 |
| 17504138 | Ccl17 | chemokine (C-C motif) ligand 17 | 14.27 | 12.45 | 14.89 | 24.22 | 1.46 |
| 17416743 | 3110021N24Rik | RIKEN cDNA 3110021N24 gene | 42.36 | 30.73 | 62.31 | 44.53 | 1.46 |
| 17335129 | Hmga1 | high mobility group AT-hook 1 | 38.42 | 44.98 | 51.65 | 70.18 | 1.46 |
| 17518310 | | | 7.43 | 6.94 | 9.03 | 11.94 | 1.46 |
| 17417654 | | | 39.47 | 35.09 | 60.47 | 48.34 | 1.46 |
| 17517244 | 4933407I05Rik | RIKEN cDNA 4933407I05 gene | 8.88 | 9.45 | 13.21 | 13.52 | 1.46 |
| 17509125 | | | 6.31 | 5.82 | 9.47 | 8.21 | 1.46 |
| 17423490 | Ripk2 | receptor (TNFRSF)-interacting serine-threonine kinase 2 | 19.16 | 15.34 | 27.43 | 22.83 | 1.46 |
| 17307801 | Gulo | gulonolactone (L-) oxidase | 31.43 | 25.81 | 50.17 | 33.14 | 1.46 |
| 17383816 | Gm13609 | predicted gene 13609 | 80.60 | 61.47 | 112.78 | 93.62 | 1.45 |
| 17353574 | | | 12.45 | 13.03 | 12.85 | 24.10 | 1.45 |
| 17535274 | 1110012L19Rik | RIKEN cDNA 1110012L19 gene | 36.22 | 30.44 | 43.06 | 53.52 | 1.45 |
| 17297299 | B230110C06Rik | RIKEN cDNA B230110C06 gene | 9.85 | 8.40 | 14.02 | 12.42 | 1.45 |
| 17409500 | | | 12.07 | 13.05 | 22.06 | 14.28 | 1.45 |
| 17238760 | | | 21.29 | 17.91 | 22.83 | 33.85 | 1.45 |
| 17433973 | Mir200a | microRNA 200a | 11.21 | 13.19 | 12.43 | 22.85 | 1.45 |
| 17416009 | Gm12794 | predicted gene 12794 | 5.58 | 6.61 | 7.52 | 10.10 | 1.45 |
| 17470794 | Mir200c | microRNA 200c | 24.66 | 12.87 | 27.56 | 26.68 | 1.45 |
| 17332891 | n-R5s26 | nuclear encoded rRNA 5S 26 | 7.65 | 10.61 | 10.24 | 16.14 | 1.44 |
| 17263140 | | | 15.86 | 11.74 | 26.24 | 13.60 | 1.44 |

**Supplementary Table 2**

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17221932 | | | 53.60 | 27.94 | 51.15 | 66.54 | 1.44 |
| 17424199 | | | 85.81 | 50.49 | 67.95 | 128.69 | 1.44 |
| 17267482 | | | 13.73 | 16.83 | 14.93 | 29.13 | 1.44 |
| 17527982 | Glce | glucuronyl C5-epimerase | 27.24 | 23.80 | 30.13 | 43.44 | 1.44 |
| 17511211 | Mast1 | microtubule associated serine/threonine kinase 1 | 39.77 | 33.96 | 47.38 | 58.88 | 1.44 |
| 17369948 | Mir1954 | microRNA 1954 | 113.23 | 104.63 | 155.33 | 158.54 | 1.44 |
| 17237004 | | | 8.25 | 10.87 | 15.07 | 12.46 | 1.44 |
| 17428799 | Rps8 | ribosomal protein S8 | 82.51 | 73.69 | 112.05 | 112.69 | 1.44 |
| 17542090 | Mir465b-1 | microRNA 465b-1 | 7.45 | 6.82 | 9.32 | 11.21 | 1.44 |
| 17542094 | Mir465b-1 | microRNA 465b-1 | 7.45 | 6.82 | 9.32 | 11.21 | 1.44 |
| 17504958 | Nutf2 | nuclear transport factor 2 | 33.37 | 27.66 | 45.39 | 42.25 | 1.44 |
| 17345122 | | | 8.27 | 10.57 | 19.23 | 7.79 | 1.43 |
| 17418154 | Oxct2b | 3-oxoacid CoA transferase 2B | 10.81 | 12.02 | 21.72 | 11.01 | 1.43 |
| 17289794 | Plk2 | polo-like kinase 2 (Drosophila) | 92.63 | 110.95 | 154.71 | 137.07 | 1.43 |
| 17339497 | Snord92 | small nucleolar RNA, C/D box 92 | 59.26 | 46.19 | 82.77 | 68.36 | 1.43 |
| 17274412 | | | 12.62 | 13.00 | 23.43 | 13.27 | 1.43 |
| 17511112 | Ccdc130 | coiled-coil domain containing 130 | 24.64 | 21.27 | 34.55 | 31.15 | 1.43 |
| 17467193 | Vmn1r25 | vomeronasal 1 receptor 25 | 9.27 | 7.28 | 12.57 | 11.10 | 1.43 |
| 17544149 | Hmgn5 | high-mobility group nucleosome binding domain 5 | 32.08 | 51.36 | 55.62 | 63.70 | 1.43 |
| 17341283 | Gm7535 | predicted gene 7535 | 28.33 | 26.84 | 51.24 | 27.64 | 1.43 |
| 17493398 | | | 6.72 | 5.84 | 7.31 | 10.64 | 1.43 |
| 17507790 | | | 72.19 | 50.83 | 84.86 | 90.73 | 1.43 |
| 17313645 | | | 75.77 | 92.73 | 105.86 | 134.58 | 1.43 |
| 17353030 | | | 11.25 | 9.63 | 12.28 | 17.49 | 1.43 |
| 17419371 | Gm13063 | predicted gene 13063 | 15.85 | 17.35 | 26.12 | 21.18 | 1.42 |
| 17494813 | Olfr516 | olfactory receptor 516 | 7.51 | 6.61 | 11.87 | 8.24 | 1.42 |
| 17446507 | Gm10220 | predicted gene 10220 | 7.77 | 9.55 | 13.97 | 10.68 | 1.42 |
| 17284447 | | | 47.65 | 38.24 | 55.35 | 66.83 | 1.42 |
| 17331272 | Olfr205 | olfactory receptor 205 | 6.86 | 6.68 | 11.78 | 7.48 | 1.42 |
| 17544158 | | | 5.46 | 5.51 | 9.55 | 6.04 | 1.42 |
| 17478745 | Atp10a | ATPase, class V, type 10A | 34.15 | 40.01 | 59.26 | 46.11 | 1.42 |
| 17493681 | Rps3 | ribosomal protein S3 | 50.40 | 29.92 | 38.30 | 75.81 | 1.42 |
| 17314575 | | | 57.00 | 38.35 | 63.59 | 71.83 | 1.42 |
| 17424243 | AI464131 | expressed sequence AI464131 | 36.91 | 34.81 | 59.08 | 42.74 | 1.42 |
| 17405612 | Vmn2r3 | vomeronasal 2, receptor 3 | 77.83 | 49.93 | 94.69 | 86.55 | 1.42 |
| 17229257 | | | 55.05 | 55.05 | 84.47 | 71.61 | 1.42 |
| 17256314 | Krtap9-1 | keratin associated protein 9-1 | 68.51 | 64.46 | 94.20 | 94.26 | 1.42 |
| 17430004 | | | 7.49 | 5.21 | 10.96 | 7.04 | 1.42 |
| 17393998 | | | 9.20 | 8.77 | 12.08 | 13.33 | 1.41 |
| 17390806 | | | 16.22 | 13.87 | 25.20 | 17.36 | 1.41 |
| 17254614 | | | 74.24 | 78.49 | 120.55 | 95.47 | 1.41 |
| 17528214 | | | 9.83 | 7.75 | 9.31 | 15.52 | 1.41 |
| 17358092 | | | 60.68 | 28.16 | 60.85 | 64.61 | 1.41 |
| 17300608 | Rec8 | REC8 homolog (yeast) | 21.83 | 23.34 | 34.56 | 29.20 | 1.41 |
| 17471598 | Klrc1 | killer cell lectin-like receptor subfamily C, member 1 | 10.03 | 10.80 | 15.61 | 13.79 | 1.41 |
| 17337110 | H2-Q5 | histocompatibility 2, Q region locus 5 | 14.10 | 11.95 | 21.78 | 14.98 | 1.41 |
| 17331987 | Mis18a | MIS18 kinetochore protein homolog A (S. pombe) | 25.93 | 28.55 | 31.99 | 44.82 | 1.41 |
| 17303599 | Oxsm | 3-oxoacyl-ACP synthase, mitochondrial | 16.46 | 13.79 | 22.03 | 20.62 | 1.41 |
| 17318312 | Nrbp2 | nuclear receptor binding protein 2 | 43.70 | 37.28 | 61.44 | 52.72 | 1.41 |
| 17265524 | | | 46.56 | 38.22 | 67.92 | 51.57 | 1.41 |
| 17324473 | | | 10.80 | 12.28 | 14.22 | 18.29 | 1.41 |
| 17426695 | Gm11261 | predicted gene 11261 | 12.87 | 11.79 | 14.92 | 19.83 | 1.41 |
| 17263416 | Zfp867 | zinc finger protein 867 | 13.56 | 11.37 | 19.50 | 15.60 | 1.41 |
| 17457969 | Olfr38 | olfactory receptor 38 | 41.44 | 26.44 | 42.94 | 52.60 | 1.41 |
| 17240663 | | | 6.69 | 6.25 | 6.36 | 11.85 | 1.41 |
| 17287866 | 1700066J03Rik | RIKEN cDNA 1700066J03 gene | 17.93 | 13.66 | 28.27 | 16.18 | 1.41 |
| 17541719 | Mir450-2 | microRNA 450-2 | 14.74 | 16.25 | 22.76 | 20.82 | 1.41 |
| 17416811 | Mir761 | microRNA 761 | 1559.97 | 739.15 | 1659.58 | 1572.02 | 1.41 |
| 17535710 | | | 62.29 | 42.60 | 74.87 | 72.56 | 1.41 |
| 17467401 | | | 22.01 | 15.06 | 26.70 | 25.39 | 1.41 |
| 17366912 | | | 10.44 | 5.68 | 13.38 | 9.27 | 1.41 |
| 17271531 | Gm11677 | predicted gene 11677 | 19.92 | 16.68 | 24.21 | 27.21 | 1.41 |
| 17300086 | Trav3-4 | T cell receptor alpha variable 3-4 | 14.34 | 11.64 | 18.52 | 17.97 | 1.40 |
| 17302709 | | | 30.20 | 27.51 | 49.06 | 31.96 | 1.40 |
| 17533774 | | | 5.89 | 5.02 | 8.55 | 6.76 | 1.40 |
| 17506270 | Gm10614 | predicted gene 10614 | 12.06 | 13.21 | 24.05 | 11.39 | 1.40 |
| 17465856 | Ptn | pleiotrophin | 26.53 | 30.01 | 46.62 | 32.66 | 1.40 |
| 17287033 | | | 25.49 | 45.19 | 26.85 | 72.22 | 1.40 |
| 17481167 | Olfr582 | olfactory receptor 582 | 6.45 | 5.44 | 6.54 | 10.12 | 1.40 |
| 17529367 | Ube2cbp | ubiquitin-conjugating enzyme E2C binding protein | 10.23 | 11.40 | 11.66 | 18.64 | 1.40 |
| 17272743 | | | 13.01 | 7.21 | 7.23 | 21.04 | 1.40 |
| 17337945 | Gm17080 | predicted gene 17080 | 8.66 | 7.51 | 9.79 | 12.82 | 1.40 |
| 17288583 | | | 29.21 | 25.94 | 44.90 | 32.19 | 1.40 |
| 17339852 | Eif2ak2 | eukaryotic translation initiation factor 2-alpha kinase 2 | 33.35 | 14.70 | 19.74 | 47.38 | 1.40 |
| 17495318 | | | 417.19 | 249.13 | 488.11 | 442.56 | 1.40 |
| 17439365 | | | 27.05 | 21.77 | 32.30 | 35.90 | 1.40 |
| 17547713 | Gm19929 | predicted gene, 19929 | 38.09 | 26.54 | 42.88 | 47.34 | 1.40 |
| 17487507 | n-R5s152 | nuclear encoded rRNA 5S 152 | 15.03 | 12.72 | 22.97 | 15.75 | 1.40 |
| 17344692 | Gm10499 | predicted gene 10499 | 19.84 | 16.21 | 30.46 | 19.83 | 1.40 |
| 17462985 | | | 66.32 | 41.33 | 54.02 | 96.12 | 1.39 |
| 17237681 | 9230105E05Rik | RIKEN cDNA 9230105E05 gene | 33.31 | 30.21 | 55.34 | 33.19 | 1.39 |
| 17512084 | | | 11.19 | 11.08 | 14.16 | 16.87 | 1.39 |
| 17486543 | Vmn2r54 | vomeronasal 2, receptor 54 | 15.92 | 21.34 | 25.67 | 26.24 | 1.39 |
| 17463837 | LOC627096 | uncharacterized LOC627096 | 25.32 | 21.37 | 33.41 | 31.64 | 1.39 |
| 17364988 | Cpn1 | carboxypeptidase N, polypeptide 1 | 23.51 | 27.33 | 28.13 | 42.58 | 1.39 |
| 17387674 | Olfr1061 | olfactory receptor 1061 | 5.83 | 5.27 | 6.72 | 8.72 | 1.39 |
| 17499818 | Defb2 | defensin beta 2 | 25.42 | 20.31 | 28.73 | 34.83 | 1.39 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17351224 | | | 6.04 | 5.87 | 7.06 | 9.49 | 1.39 |
| 17337576 | Olfr110 | olfactory receptor 110 | 6.89 | 6.50 | 9.73 | 8.87 | 1.39 |
| 17234798 | n-R5s77 | nuclear encoded rRNA 5S 77 | 10.85 | 13.79 | 23.33 | 10.89 | 1.39 |
| 17471452 | Klrb1c | killer cell lectin-like receptor subfamily B member 1C | 10.94 | 13.50 | 18.26 | 15.66 | 1.39 |
| 17399233 | | | 71.73 | 52.79 | 92.61 | 80.19 | 1.39 |
| 17361600 | Ccdc85b | coiled-coil domain containing 85B | 16.80 | 17.38 | 25.98 | 21.45 | 1.39 |
| 17473166 | Cacng6 | calcium channel, voltage-dependent, gamma subunit 6 | 9.80 | 9.77 | 13.92 | 13.20 | 1.39 |
| 17548944 | Slamf6 | SLAM family member 6 | 28.28 | 26.05 | 39.69 | 35.53 | 1.38 |
| 17545899 | S100g | S100 calcium binding protein G | 439.97 | 762.53 | 1037.79 | 626.82 | 1.38 |
| 17231491 | Gm3213 | predicted gene 3213 | 7.21 | 5.73 | 10.24 | 7.66 | 1.38 |
| 17238528 | | | 16.48 | 14.84 | 25.63 | 17.67 | 1.38 |
| 17321939 | Krt6b | keratin 6B | 7.93 | 6.00 | 11.29 | 7.97 | 1.38 |
| 17354297 | | | 7.07 | 10.31 | 14.45 | 9.57 | 1.38 |
| 17322075 | Krt4 | keratin 4 | 32.14 | 34.01 | 48.01 | 43.39 | 1.38 |
| 17269333 | Krt36 | keratin 36 | 11.05 | 15.00 | 15.27 | 20.71 | 1.38 |
| 17293517 | 6720489N17Rik | RIKEN cDNA 6720489N17 gene | 20.31 | 18.40 | 23.81 | 29.65 | 1.38 |
| 17346932 | 5031415H12Rik | RIKEN cDNA 5031415H12 gene | 12.63 | 11.83 | 17.72 | 16.06 | 1.38 |
| 17372771 | Olfr1022 | olfactory receptor 1022 | 4.83 | 4.66 | 7.15 | 5.94 | 1.38 |
| 17457874 | Tas2r144 | taste receptor, type 2, member 144 | 8.88 | 10.24 | 16.45 | 9.91 | 1.38 |
| 17342338 | | | 53.54 | 51.33 | 74.32 | 70.09 | 1.38 |
| 17467554 | | | 44.53 | 80.68 | 58.80 | 113.54 | 1.38 |
| 17278820 | Mir494 | microRNA 494 | 57.50 | 47.36 | 76.49 | 67.81 | 1.38 |
| 17467298 | Vmn1r34 | vomeronasal 1 receptor 34 | 13.38 | 12.55 | 13.72 | 21.96 | 1.38 |
| 17533939 | Gmcl1l | germ cell-less homolog 1 (Drosophila)-like | 12.44 | 14.66 | 17.63 | 19.65 | 1.38 |
| 17512529 | Cenpt | centromere protein T | 40.83 | 33.00 | 53.82 | 47.66 | 1.37 |
| 17327426 | | | 11.19 | 12.79 | 16.00 | 16.95 | 1.37 |
| 17333344 | Snora20 | small nucleolar RNA, H/ACA box 20 | 15.40 | 7.94 | 13.73 | 18.34 | 1.37 |
| 17473736 | Vmn1r80 | vomeronasal 1 receptor 80 | 7.96 | 8.61 | 13.91 | 8.85 | 1.37 |
| 17484261 | Mir1962 | microRNA 1962 | 34.30 | 38.84 | 50.08 | 50.38 | 1.37 |
| 17513278 | Gm16117 | predicted gene 16117 | 7.86 | 7.41 | 9.80 | 11.17 | 1.37 |
| 17384175 | | | 12.20 | 16.11 | 24.05 | 14.84 | 1.37 |
| 17507940 | Defb9 | defensin beta 9 | 7.42 | 7.15 | 7.66 | 12.35 | 1.37 |
| 17298895 | Mir346 | microRNA 346 | 55.04 | 34.85 | 71.69 | 51.75 | 1.37 |
| 17348280 | | | 30.55 | 38.65 | 55.67 | 39.30 | 1.37 |
| 17211984 | 4930556I23Rik | RIKEN cDNA 4930556I23 gene | 21.89 | 25.12 | 36.39 | 28.14 | 1.37 |
| 17372779 | Olfr1028 | olfactory receptor 1028 | 6.77 | 5.65 | 9.36 | 7.69 | 1.37 |
| 17255874 | | | 5.50 | 5.69 | 6.29 | 9.06 | 1.37 |
| 17494473 | Olfr686 | olfactory receptor 686 | 18.35 | 18.66 | 23.32 | 27.45 | 1.37 |
| 17392828 | Gm14167 | predicted gene 14167 | 15.06 | 12.28 | 23.17 | 14.31 | 1.37 |
| 17459312 | | | 21.49 | 20.83 | 27.38 | 30.62 | 1.37 |
| 17342483 | Fam195a | family with sequence similarity 195, member A | 26.55 | 42.44 | 30.52 | 64.04 | 1.37 |
| 17416891 | | | 22.91 | 24.13 | 31.12 | 33.33 | 1.37 |
| 17518268 | | | 9.05 | 8.66 | 8.72 | 15.53 | 1.37 |
| 17256323 | Krtap31-1 | keratin associated protein 31-1 | 11.63 | 10.63 | 15.17 | 15.32 | 1.37 |
| 17545761 | Gm15243 | predicted gene 15243 | 28.44 | 30.42 | 41.06 | 39.50 | 1.37 |
| 17305854 | | | 7.15 | 6.50 | 8.64 | 10.03 | 1.37 |
| 17460634 | Gata2 | GATA binding protein 2 | 26.05 | 19.65 | 30.91 | 31.61 | 1.37 |
| 17488735 | Spred3 | sprouty-related, EVH1 domain containing 3 | 40.74 | 36.52 | 55.12 | 50.56 | 1.37 |
| 17230327 | | | 107.53 | 86.56 | 133.72 | 131.58 | 1.37 |
| 17321511 | | | 6.07 | 6.29 | 6.95 | 9.94 | 1.37 |
| 17434869 | Gm21083 | predicted gene, 21083 | 4.78 | 5.58 | 7.11 | 7.06 | 1.37 |
| 17366886 | Mir467e | microRNA 467e | 293.97 | 136.51 | 253.54 | 334.50 | 1.37 |
| 17547980 | Olfr175-ps1 | olfactory receptor 175, pseudogene 1 | 6.75 | 6.30 | 8.40 | 9.42 | 1.37 |
| 17284650 | | | 15.94 | 11.58 | 20.95 | 16.63 | 1.37 |
| 17288302 | Rsl1 | regulator of sex limited protein 1 | 7.18 | 7.23 | 9.64 | 10.05 | 1.37 |
| 17299860 | Trav12-2 | T cell receptor alpha variable 12-2 | 18.17 | 19.95 | 28.23 | 23.80 | 1.36 |
| 17299937 | Trav12-2 | T cell receptor alpha variable 12-2 | 18.17 | 19.95 | 28.23 | 23.80 | 1.36 |
| 17300733 | | | 36.92 | 17.41 | 31.25 | 42.87 | 1.36 |
| 17497709 | Ifitm5 | interferon induced transmembrane protein 5 | 32.93 | 40.92 | 57.54 | 43.23 | 1.36 |
| 17325232 | | | 28.44 | 27.29 | 41.47 | 34.54 | 1.36 |
| 17475295 | 4732471J01Rik | RIKEN cDNA 4732471J01 gene | 26.72 | 26.72 | 37.09 | 35.75 | 1.36 |
| 17515715 | Zbtb44 | zinc finger and BTB domain containing 44 | 28.37 | 25.86 | 40.37 | 33.55 | 1.36 |
| 17333672 | Riok2 | RIO kinase 2 (yeast) | 17.02 | 17.89 | 23.64 | 23.94 | 1.36 |
| 17486058 | Vmn1r61 | vomeronasal 1 receptor 61 | 4.64 | 5.54 | 5.82 | 8.05 | 1.36 |
| 17369368 | Ncs1 | neuronal calcium sensor 1 | 17.93 | 17.73 | 26.02 | 22.57 | 1.36 |
| 17481330 | Olfr661 | olfactory receptor 661 | 11.43 | 11.81 | 12.82 | 18.84 | 1.36 |
| 17421364 | Gm13212 | predicted gene 13212 | 6.12 | 5.81 | 8.40 | 7.84 | 1.36 |
| 17250744 | 2410006H16Rik | RIKEN cDNA 2410006H16 gene | 45.91 | 71.24 | 76.56 | 82.86 | 1.36 |
| 17500375 | 4933433F19Rik | RIKEN cDNA 4933433F19 gene | 9.85 | 8.76 | 12.30 | 13.01 | 1.36 |
| 17412717 | | | 25.02 | 21.15 | 36.39 | 26.41 | 1.36 |
| 17495404 | Rps13 | ribosomal protein S13 | 92.12 | 71.61 | 144.67 | 78.05 | 1.36 |
| 17515238 | AB124611 | cDNA sequence AB124611 | 29.73 | 23.48 | 38.28 | 34.10 | 1.36 |
| 17288836 | | | 60.66 | 75.74 | 74.64 | 110.89 | 1.36 |
| 17495692 | Dcun1d3 | DCN1, defective in cullin neddylation 1, domain containing 3 (S. cerevisiae) | 37.23 | 41.02 | 60.60 | 45.83 | 1.36 |
| 17507128 | Fcor | Foxo1 corepressor | 19.73 | 20.39 | 21.43 | 33.13 | 1.36 |
| 17280270 | Gm9292 | predicted gene 9292 | 28.79 | 21.37 | 36.15 | 32.06 | 1.36 |
| 17307799 | | | 42.54 | 24.99 | 42.93 | 48.88 | 1.36 |
| 17391054 | | | 8.77 | 8.31 | 12.60 | 10.62 | 1.36 |
| 17252329 | 4930563E22Rik | RIKEN cDNA 4930563E22 gene | 16.41 | 13.02 | 18.02 | 21.97 | 1.36 |
| 17515813 | Kcnj1 | potassium inwardly-rectifying channel, subfamily J, member 1 | 10.56 | 13.36 | 14.89 | 17.58 | 1.36 |
| 17518543 | | | 26.71 | 24.82 | 38.03 | 31.92 | 1.36 |
| 17405627 | Vmn2r5 | vomeronasal 2, receptor 5 | 8.50 | 7.10 | 12.51 | 8.65 | 1.36 |
| 17535296 | n-R5s8 | nuclear encoded rRNA 5S 8 | 12.24 | 10.19 | 19.35 | 11.08 | 1.36 |
| 17479929 | Vmn2r71 | vomeronasal 2, receptor 71 | 6.33 | 5.58 | 9.04 | 7.13 | 1.36 |
| 17274735 | Tmem18 | transmembrane protein 18 | 31.73 | 35.77 | 50.52 | 41.06 | 1.36 |
| 17269905 | | | 38.39 | 42.59 | 52.43 | 57.45 | 1.36 |
| 17539271 | Gpr64 | G protein-coupled receptor 64 | 24.60 | 21.63 | 30.90 | 31.79 | 1.36 |

## Supplementary Table 2

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17539824 | Mir188 | microRNA 188 | 21.89 | 29.96 | 32.80 | 37.52 | 1.36 |
| 17225630 | Kif1a | kinesin family member 1A | 15.50 | 17.71 | 23.88 | 21.14 | 1.36 |
| 17439797 | Dspp | dentin sialophosphoprotein | 10.62 | 9.29 | 13.12 | 13.83 | 1.35 |
| 17248621 | Ccnjl | cyclin J-like | 29.27 | 32.08 | 44.26 | 38.79 | 1.35 |
| 17424771 | Spag8 | sperm associated antigen 8 | 40.71 | 27.60 | 50.39 | 42.06 | 1.35 |
| 17369487 | Ass1 | argininosuccinate synthetase 1 | 22.03 | 19.67 | 29.06 | 27.37 | 1.35 |
| 17348589 | Mir1948 | microRNA 1948 | 8.89 | 9.15 | 10.40 | 14.00 | 1.35 |
| 17390614 | Mfap1b | microfibrillar-associated protein 1B | 37.83 | 27.38 | 42.61 | 45.62 | 1.35 |
| 17246449 | Olfr818 | olfactory receptor 818 | 7.01 | 7.00 | 10.94 | 8.01 | 1.35 |
| 17312095 | | | 23.74 | 25.78 | 23.60 | 43.36 | 1.35 |
| 17262598 | Olfr1371 | olfactory receptor 1371 | 58.90 | 47.09 | 78.45 | 64.84 | 1.35 |
| 17359304 | Cyp2c39 | cytochrome P450, family 2, subfamily c, polypeptide 39 | 23.19 | 22.79 | 32.38 | 29.77 | 1.35 |
| 17323707 | Gm15764 | predicted gene 15764 | 20.66 | 17.66 | 28.81 | 22.98 | 1.35 |
| 17543850 | Mir672 | microRNA 672 | 11.15 | 7.41 | 12.62 | 12.46 | 1.35 |
| 17431811 | Pla2g2f | phospholipase A2, group IIF | 149.13 | 160.45 | 183.47 | 234.79 | 1.35 |
| 17285065 | | | 10.14 | 9.26 | 15.46 | 10.73 | 1.35 |
| 17240431 | Smpd2 | sphingomyelin phosphodiesterase 2, neutral | 39.62 | 39.26 | 47.74 | 58.76 | 1.35 |
| 17277970 | D130020L05Rik | RIKEN cDNA D130020L05 gene | 15.41 | 15.71 | 23.84 | 18.14 | 1.35 |
| 17505475 | Gm16349 | predicted gene 16349 | 12.08 | 11.21 | 15.82 | 15.60 | 1.35 |
| 17397552 | C820005J03Rik | RIKEN cDNA C820005J03 gene | 7.86 | 7.50 | 10.76 | 9.95 | 1.35 |
| 17233037 | | | 7.74 | 7.66 | 9.17 | 11.61 | 1.35 |
| 17216554 | | | 143.31 | 62.59 | 143.59 | 134.08 | 1.35 |
| 17326794 | LOC100653389 | uncharacterized LOC100653389 | 27.77 | 24.79 | 39.02 | 31.81 | 1.35 |
| 17356622 | Cdca5 | cell division cycle associated 5 | 49.31 | 55.62 | 60.29 | 81.11 | 1.35 |
| 17532653 | mt-Tp | mitochondrially encoded tRNA proline | 107.46 | 69.68 | 125.39 | 113.18 | 1.35 |
| 17300119 | | | 157.91 | 118.97 | 183.20 | 189.49 | 1.35 |
| 17225811 | | | 54.90 | 25.27 | 54.83 | 53.09 | 1.35 |
| 17439326 | Gm3286 | predicted gene 3286 | 10.68 | 9.45 | 12.65 | 14.44 | 1.35 |
| 17233663 | Mir466j | microRNA 466j | 355.57 | 200.41 | 393.60 | 354.43 | 1.35 |
| 17325347 | Stfa1 | stefin A1 | 10.09 | 8.95 | 16.75 | 8.87 | 1.35 |
| 17293475 | Gm19792 | predicted gene, 19792 | 7.93 | 7.35 | 10.98 | 9.57 | 1.34 |
| 17467382 | | | 11.19 | 9.29 | 14.90 | 12.64 | 1.34 |
| 17260175 | | | 7.53 | 7.07 | 8.48 | 11.16 | 1.34 |
| 17273159 | Ppp1r27 | protein phosphatase 1, regulatory subunit 27 | 18.84 | 17.94 | 23.55 | 25.90 | 1.34 |
| 17239182 | | | 24.65 | 48.27 | 45.37 | 52.64 | 1.34 |
| 17324742 | Gm15729 | predicted gene 15729 | 8.54 | 8.34 | 11.09 | 11.61 | 1.34 |
| 17483061 | Ccdc101 | coiled-coil domain containing 101 | 30.45 | 25.92 | 38.68 | 37.07 | 1.34 |
| 17544826 | | | 5.72 | 6.01 | 9.62 | 6.14 | 1.34 |
| 17352203 | Zfp516 | zinc finger protein 516 | 30.20 | 31.76 | 42.32 | 40.93 | 1.34 |
| 17392801 | | | 33.30 | 26.54 | 38.91 | 41.48 | 1.34 |
| 17396876 | | | 11.61 | 14.40 | 16.76 | 18.17 | 1.34 |
| 17507915 | | | 64.93 | 67.18 | 94.25 | 83.12 | 1.34 |
| 17339572 | | | 13.73 | 14.76 | 20.02 | 18.22 | 1.34 |
| 17313953 | | | 21.36 | 28.71 | 26.13 | 41.11 | 1.34 |
| 17353333 | A830052D11Rik | RIKEN cDNA A830052D11 gene | 13.76 | 13.67 | 17.39 | 19.44 | 1.34 |
| 17339460 | Lpin2 | lipin 2 | 7.33 | 7.13 | 10.15 | 9.26 | 1.34 |
| 17435636 | 9530036O11Rik | RIKEN cDNA 9530036O11Rik | 11.53 | 10.97 | 17.77 | 12.43 | 1.34 |
| 17220898 | | | 4.69 | 4.57 | 6.43 | 5.99 | 1.34 |
| 17216745 | Gpr39 | G protein-coupled receptor 39 | 47.94 | 46.31 | 68.03 | 58.39 | 1.34 |
| 17418059 | Col9a2 | collagen, type IX, alpha 2 | 64.87 | 75.44 | 94.00 | 94.19 | 1.34 |
| 17418304 | Mir697 | microRNA 697 | 14.98 | 21.22 | 26.08 | 22.46 | 1.34 |
| 17476528 | Sbsn | suprabasin | 28.78 | 41.32 | 47.92 | 46.06 | 1.34 |
| 17420895 | | | 92.52 | 81.46 | 128.28 | 104.98 | 1.34 |
| 17459151 | | | 9.59 | 9.83 | 15.17 | 10.88 | 1.34 |
| 17524139 | | | 16.49 | 13.90 | 19.98 | 20.73 | 1.34 |
| 17447610 | Msx1 | homeobox, msh-like 1 | 62.01 | 67.51 | 114.73 | 58.72 | 1.34 |
| 17532577 | 2010315B03Rik | RIKEN cDNA 2010315B03 gene | 18.53 | 18.42 | 26.77 | 22.70 | 1.34 |
| 17507825 | Defb40 | defensin beta 40 | 6.45 | 6.16 | 8.14 | 8.75 | 1.34 |
| 17287790 | H2afy | H2A histone family, member Y | 54.85 | 75.16 | 116.30 | 57.75 | 1.34 |
| 17284362 | Ighj1 | immunoglobulin heavy joining 1 | 60.08 | 35.99 | 84.47 | 44.12 | 1.34 |
| 17284426 | Ighm | immunoglobulin heavy constant mu | 125.78 | 87.01 | 152.58 | 132.23 | 1.34 |
| 17324332 | Fetub | fetuin beta | 36.92 | 23.05 | 31.99 | 48.26 | 1.34 |
| 17486299 | Vmn2r45 | vomeronasal 2, receptor 45 | 17.95 | 14.38 | 24.36 | 18.90 | 1.34 |
| 17299991 | Trav7-4 | T cell receptor alpha variable 7-4 | 6.64 | 6.28 | 9.88 | 7.40 | 1.34 |
| 17334404 | Gm8842 | predicted gene 8842 | 12.87 | 14.11 | 18.42 | 17.68 | 1.34 |
| 17271201 | | | 12.26 | 24.93 | 40.69 | 9.07 | 1.34 |
| 17407706 | | | 89.73 | 57.61 | 103.49 | 93.63 | 1.34 |
| 17270724 | 5330430P22Rik | RIKEN cDNA 5330430P22 gene | 12.02 | 15.28 | 16.58 | 19.93 | 1.34 |
| 17356924 | Nrxn2 | neurexin II | 15.25 | 16.46 | 21.23 | 21.18 | 1.34 |
| 17281607 | | | 11.17 | 12.28 | 17.95 | 13.42 | 1.34 |
| 17494168 | Olfr601 | olfactory receptor 601 | 14.56 | 12.41 | 17.30 | 18.77 | 1.34 |
| 17218565 | Scarna3a | small Cajal body-specific RNA 3A | 45.61 | 43.30 | 57.16 | 61.72 | 1.34 |
| 17215832 | Mir149 | microRNA 149 | 71.31 | 59.83 | 100.95 | 74.39 | 1.34 |
| 17305381 | Gm8020 | predicted gene 8020 | 7.04 | 6.25 | 9.47 | 8.30 | 1.34 |
| 17328040 | | | 19.73 | 24.87 | 31.88 | 27.74 | 1.34 |
| 17303821 | Mss51 | MSS51 mitochondrial translational activator | 9.95 | 8.77 | 12.43 | 12.59 | 1.34 |
| 17277900 | Kcnk13 | potassium channel, subfamily K, member 13 | 13.56 | 13.97 | 19.05 | 17.74 | 1.34 |
| 17249301 | Col23a1 | collagen, type XXIII, alpha 1 | 28.01 | 29.23 | 44.96 | 31.50 | 1.34 |
| 17533469 | Cypt1 | cysteine-rich perinuclear theca 1 | 6.55 | 5.87 | 8.32 | 8.27 | 1.34 |
| 17324637 | Fam43a | family with sequence similarity 43, member A | 70.71 | 82.46 | 111.81 | 92.77 | 1.34 |
| 17218321 | Rgs16 | regulator of G-protein signaling 16 | 26.72 | 23.11 | 22.10 | 44.42 | 1.33 |
| 17285922 | Slc17a1 | solute carrier family 17 (sodium phosphate), member 1 | 23.86 | 16.27 | 27.19 | 26.36 | 1.33 |
| 17536496 | Tmem28 | transmembrane protein 28 | 21.16 | 21.01 | 28.39 | 27.88 | 1.33 |
| 17235821 | Gm10778 | predicted gene 10778 | 18.82 | 22.62 | 31.24 | 24.05 | 1.33 |
| 17548530 | Ldhb | lactate dehydrogenase B | 24.84 | 25.25 | 36.74 | 30.07 | 1.33 |
| 17309065 | Mzt1 | mitotic spindle organizing protein 1 | 60.55 | 79.21 | 78.92 | 107.52 | 1.33 |
| 17396369 | Nceh1 | arylacetamide deacetylase-like 1 | 16.31 | 15.26 | 19.72 | 22.38 | 1.33 |

## Supplementary Table 2

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17261031 | | | 48.69 | 40.66 | 62.48 | 56.63 | 1.33 |
| 17401725 | | | 7.10 | 7.14 | 11.08 | 7.89 | 1.33 |
| 17531705 | Ccrl2 | chemokine (C-C motif) receptor-like 2 | 11.25 | 9.25 | 12.99 | 14.34 | 1.33 |
| 17464713 | | | 8.99 | 9.00 | 14.52 | 9.45 | 1.33 |
| 17334666 | Tpsb2 | tryptase beta 2 | 46.27 | 14.92 | 35.87 | 45.64 | 1.33 |
| 17438233 | Gsx2 | GS homeobox 2 | 15.07 | 15.75 | 17.27 | 23.77 | 1.33 |
| 17455673 | LOC100862180 | PRAME family member 12-like | 373.28 | 167.64 | 307.44 | 412.91 | 1.33 |
| 17490104 | Vmn2r63 | vomeronasal 2, receptor 63 | 5.20 | 5.30 | 7.58 | 6.40 | 1.33 |
| 17302928 | AA536875 | expressed sequence AA536875 | 8.23 | 8.69 | 12.29 | 10.24 | 1.33 |
| 17474858 | | | 5.05 | 5.05 | 7.47 | 5.97 | 1.33 |
| 17311341 | | | 43.30 | 32.75 | 47.12 | 54.07 | 1.33 |
| 17284910 | Calm5 | calmodulin 5 | 41.49 | 39.78 | 57.68 | 50.41 | 1.33 |
| 17516280 | Olfr150 | olfactory receptor 150 | 6.90 | 7.95 | 11.02 | 8.73 | 1.33 |
| 17218607 | Mrps14 | mitochondrial ribosomal protein S14 | 12.30 | 11.34 | 15.38 | 16.05 | 1.33 |
| 17367947 | | | 15.42 | 16.87 | 14.21 | 28.72 | 1.33 |
| 17290394 | | | 27.15 | 22.29 | 27.74 | 37.98 | 1.33 |
| 17290396 | | | 27.15 | 22.29 | 27.74 | 37.98 | 1.33 |
| 17503360 | | | 21.25 | 15.66 | 30.59 | 18.47 | 1.33 |
| 17324402 | | | 43.89 | 36.59 | 52.80 | 54.15 | 1.33 |
| 17221999 | | | 6.52 | 4.91 | 6.95 | 8.24 | 1.33 |
| 17382841 | C330006A16Rik | RIKEN cDNA C330006A16 gene | 36.88 | 67.68 | 41.89 | 96.94 | 1.33 |
| 17282557 | Syndig1l | synapse differentiation inducing 1 like | 17.33 | 14.35 | 25.41 | 16.65 | 1.33 |
| 17240661 | | | 8.19 | 9.15 | 12.72 | 10.29 | 1.33 |
| 17332117 | Gm15966 | predicted gene 15966 | 8.39 | 7.36 | 10.08 | 10.82 | 1.33 |
| 17313246 | | | 6.16 | 4.68 | 7.47 | 6.92 | 1.33 |
| 17501299 | | | 25.65 | 19.45 | 22.28 | 37.54 | 1.33 |
| 17543560 | | | 7.20 | 7.25 | 9.94 | 9.22 | 1.33 |
| 17541681 | Gpc3 | glypican 3 | 15.62 | 20.28 | 29.58 | 18.00 | 1.33 |
| 17344309 | Tnf | tumor necrosis factor | 51.22 | 43.47 | 63.07 | 62.42 | 1.33 |
| 17522647 | | | 11.92 | 8.93 | 14.34 | 13.28 | 1.33 |
| 17396878 | Sox2 | SRY-box containing gene 2 | 6.57 | 7.55 | 9.00 | 9.70 | 1.33 |
| 17296084 | Zswim6 | zinc finger, SWIM domain containing 6 | 42.86 | 46.93 | 46.18 | 72.78 | 1.32 |
| 17367004 | Il15ra | interleukin 15 receptor, alpha chain | 32.70 | 34.18 | 40.79 | 47.81 | 1.32 |
| 17475101 | Dmrtc2 | doublesex and mab-3 related transcription factor like family C2 | 37.78 | 32.30 | 49.16 | 43.69 | 1.32 |
| 17454326 | 1700123K08Rik | RIKEN cDNA 1700123K08 gene | 13.76 | 13.64 | 21.14 | 15.16 | 1.32 |
| 17523985 | 4930568E12Rik | RIKEN cDNA 4930568E12 gene | 13.61 | 11.84 | 16.51 | 17.21 | 1.32 |
| 17421764 | | | 172.77 | 142.94 | 250.18 | 167.99 | 1.32 |
| 17241234 | | | 32.14 | 24.48 | 45.97 | 29.01 | 1.32 |
| 17305683 | | | 28.14 | 42.38 | 60.23 | 33.15 | 1.32 |
| 17330544 | Sidt1 | SID1 transmembrane family, member 1 | 90.52 | 80.99 | 115.22 | 111.89 | 1.32 |
| 17446058 | | | 279.17 | 205.19 | 284.69 | 356.65 | 1.32 |
| 17210996 | | | 24.07 | 18.51 | 22.63 | 33.73 | 1.32 |
| 17411274 | 2510003D18Rik | RIKEN cDNA 2510003D18 gene | 11.83 | 13.15 | 16.24 | 16.81 | 1.32 |
| 17233303 | | | 16.10 | 15.67 | 19.96 | 22.07 | 1.32 |
| 17342403 | Rhot2 | ras homolog gene family, member T2 | 13.53 | 15.72 | 21.83 | 16.84 | 1.32 |
| 17480924 | | | 64.91 | 55.60 | 53.23 | 106.00 | 1.32 |
| 17281479 | n-R5s60 | nuclear encoded rRNA 5S 60 | 6.90 | 5.93 | 6.73 | 10.23 | 1.32 |
| 17217625 | Tnni1 | troponin I, skeletal, slow 1 | 29.56 | 32.89 | 48.62 | 33.88 | 1.32 |
| 17548551 | 4631423B10Rik | RIKEN cDNA 4631423B10 gene | 74.23 | 69.03 | 87.34 | 101.90 | 1.32 |
| 17408052 | Terc | telomerase RNA component | 83.94 | 71.65 | 107.75 | 97.77 | 1.32 |
| 17429331 | 4930538K18Rik | RIKEN cDNA 4930538K18 gene | 14.21 | 12.49 | 19.03 | 16.23 | 1.32 |
| 17302234 | Zbtbd6 | kelch repeat and BTB (POZ) domain containing 6 | 20.19 | 19.42 | 24.16 | 28.13 | 1.32 |
| 17306477 | Slc7a8 | solute carrier family 7 (cationic amino acid transporter, y+ system), member 8 | 61.20 | 52.77 | 60.86 | 89.61 | 1.32 |
| 17352913 | Dsc3 | desmocollin 3 | 10.18 | 12.63 | 17.37 | 12.74 | 1.32 |
| 17533124 | Ssxb9 | synovial sarcoma, X member B, breakpoint 9 | 6.36 | 5.88 | 9.45 | 6.70 | 1.32 |
| 17312899 | Galr3 | galanin receptor 3 | 18.64 | 22.92 | 28.98 | 25.86 | 1.32 |
| 17486474 | Zscan4b | zinc finger and SCAN domain containing 4B | 6.40 | 6.78 | 9.20 | 8.19 | 1.32 |
| 17421452 | | | 6.33 | 5.59 | 7.22 | 8.50 | 1.32 |
| 17423105 | | | 8.65 | 8.80 | 13.13 | 9.88 | 1.32 |
| 17445751 | | | 11.01 | 7.81 | 13.98 | 10.83 | 1.32 |
| 17221430 | | | 10.46 | 8.39 | 9.45 | 15.40 | 1.32 |
| 17473514 | Gm5065 | predicted gene 5065 | 15.62 | 11.19 | 16.77 | 18.57 | 1.32 |
| 17233767 | Mir5108 | microRNA 5108 | 20.43 | 21.73 | 22.81 | 32.73 | 1.32 |
| 17356517 | Kcnk7 | potassium channel, subfamily K, member 7 | 18.03 | 17.12 | 18.52 | 27.77 | 1.32 |
| 17317622 | Tmem71 | transmembrane protein 71 | 10.10 | 10.51 | 14.17 | 12.97 | 1.32 |
| 17352016 | | | 120.11 | 114.53 | 130.47 | 178.42 | 1.32 |
| 17429414 | Ppcs | phosphopantothenoylcysteine synthetase | 50.19 | 60.96 | 63.70 | 82.60 | 1.32 |
| 17331842 | Krtap26-1 | keratin associated protein 26-1 | 10.27 | 9.99 | 14.52 | 12.14 | 1.32 |
| 17250530 | | | 14.43 | 14.57 | 20.18 | 17.99 | 1.32 |
| 17354359 | | | 4.66 | 8.00 | 8.10 | 8.57 | 1.32 |
| 17357416 | | | 108.89 | 56.66 | 113.05 | 104.78 | 1.32 |
| 17370485 | Mir181b-2 | microRNA 181b-2 | 20.39 | 17.16 | 35.49 | 13.91 | 1.32 |
| 17510254 | Snora68 | small nucleolar RNA, H/ACA box 68 | 50.23 | 57.89 | 65.16 | 77.09 | 1.32 |
| 17489917 | Gm6818 | predicted gene 6818 | 20.55 | 15.74 | 25.07 | 22.67 | 1.32 |
| 17450748 | Mfsd7a | major facilitator superfamily domain containing 7A | 25.34 | 28.34 | 40.80 | 29.81 | 1.32 |
| 17374188 | Olfr1285 | olfactory receptor 1285 | 8.98 | 7.81 | 15.07 | 7.02 | 1.32 |
| 17402357 | 1810037I17Rik | RIKEN cDNA 1810037I17 gene | 350.97 | 389.13 | 425.28 | 546.83 | 1.31 |
| 17250089 | Olfr322 | olfactory receptor 322 | 16.35 | 13.44 | 19.12 | 20.00 | 1.31 |
| 17507938 | | | 444.11 | 321.01 | 526.96 | 477.66 | 1.31 |
| 17353597 | | | 7.60 | 7.26 | 9.18 | 10.33 | 1.31 |
| 17457745 | Gm5771 | predicted gene 5771 | 20.57 | 21.71 | 25.42 | 30.07 | 1.31 |
| 17434508 | | | 42.07 | 32.03 | 47.91 | 49.36 | 1.31 |
| 17214220 | Ctdsp1 | CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase 1 | 59.81 | 81.89 | 77.23 | 108.10 | 1.31 |
| 17459353 | | | 33.37 | 17.07 | 38.01 | 28.18 | 1.31 |
| 17398285 | | | 6.67 | 6.36 | 9.24 | 7.86 | 1.31 |
| 17443901 | Fam20c | family with sequence similarity 20, member C | 24.60 | 28.87 | 29.47 | 40.68 | 1.31 |
| 17402408 | | | 88.25 | 40.99 | 97.66 | 71.85 | 1.31 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17517716 | Gm5121 | predicted gene 5121 | 151.53 | 142.92 | 204.13 | 182.04 | 1.31 |
| 17251001 | Myh2 | myosin, heavy polypeptide 2, skeletal muscle, adult | 8.57 | 10.03 | 10.22 | 14.17 | 1.31 |
| 17437049 | Msx1as | homeobox, msh-like 1 antisense | 41.17 | 55.10 | 79.19 | 47.05 | 1.31 |
| 17366940 | | | 77.58 | 59.85 | 83.47 | 96.73 | 1.31 |
| 17537906 | Kir3dl1 | killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1 | 5.50 | 6.13 | 7.91 | 7.34 | 1.31 |
| 17240665 | | | 23.35 | 11.57 | 23.18 | 22.58 | 1.31 |
| 17333879 | Gm6811 | predicted gene 6811 | 17.49 | 16.05 | 23.80 | 20.14 | 1.31 |
| 17462224 | | | 8.92 | 15.14 | 17.66 | 13.86 | 1.31 |
| 17503784 | Fto | fat mass and obesity associated | 46.48 | 43.25 | 64.10 | 53.41 | 1.31 |
| 17427886 | Gm12786 | predicted gene 12786 | 8.95 | 7.73 | 11.82 | 10.02 | 1.31 |
| 17238646 | Olfr774 | olfactory receptor 774 | 7.07 | 5.33 | 5.85 | 10.38 | 1.31 |
| 17473910 | | | 17.94 | 7.96 | 20.80 | 13.12 | 1.31 |
| 17267011 | Gm11437 | predicted gene 11437 | 38.60 | 40.06 | 46.71 | 56.23 | 1.31 |
| 17535342 | | | 85.97 | 69.63 | 97.92 | 105.64 | 1.31 |
| 17401058 | Gm16160 | predicted gene 16160 | 13.58 | 14.95 | 20.52 | 16.79 | 1.31 |
| 17499610 | Defb5 | defensin beta 5 | 6.58 | 5.30 | 8.01 | 7.52 | 1.31 |
| 17344334 | Gm20527 | predicted gene 20527 | 7.44 | 7.13 | 8.41 | 10.64 | 1.31 |
| 17397492 | n-R5s196 | nuclear encoded rRNA 5S 196 | 6.03 | 8.41 | 8.83 | 10.05 | 1.31 |
| 17542836 | 4933407K13Rik | RIKEN cDNA 4933407K13 gene | 17.35 | 16.08 | 20.56 | 23.14 | 1.31 |
| 17264634 | | | 79.50 | 132.57 | 131.46 | 145.82 | 1.31 |
| 17335177 | Uhrf1bp1 | UHRF1 (ICBP90) binding protein 1 | 27.71 | 28.78 | 40.34 | 33.50 | 1.31 |
| 17365508 | Gm16068 | predicted gene 16068 | 47.56 | 30.42 | 47.16 | 54.80 | 1.31 |
| 17300201 | Traj25 | T cell receptor alpha joining 25 | 9.18 | 8.27 | 10.21 | 12.61 | 1.31 |
| 17388033 | Olfr142 | olfactory receptor 142 | 7.66 | 6.97 | 10.12 | 8.99 | 1.31 |
| 17513603 | Zcchc14 | zinc finger, CCHC domain containing 14 | 65.38 | 68.64 | 98.22 | 76.90 | 1.31 |
| 17433234 | | | 30.33 | 28.82 | 39.10 | 38.17 | 1.31 |
| 17290447 | Chrm3 | cholinergic receptor, muscarinic 3, cardiac | 11.23 | 10.98 | 15.08 | 13.94 | 1.31 |
| 17535096 | | | 128.68 | 68.10 | 101.75 | 155.26 | 1.31 |
| 17458514 | Npy | neuropeptide Y | 131.42 | 73.72 | 155.10 | 112.81 | 1.31 |
| 17491352 | Mrgprb4 | MAS-related GPR, member B4 | 9.23 | 7.80 | 12.74 | 9.49 | 1.31 |
| 17442780 | Glt1d1 | glycosyltransferase 1 domain containing 1 | 16.45 | 22.33 | 25.04 | 25.61 | 1.31 |
| 17331583 | | | 6.85 | 6.39 | 8.50 | 8.79 | 1.31 |
| 17424042 | Aptx | aprataxin | 20.27 | 18.20 | 25.86 | 24.37 | 1.31 |
| 17232731 | Rnu3a | U3A small nuclear RNA | 291.72 | 248.62 | 329.18 | 376.11 | 1.31 |
| 17500170 | | | 18.88 | 18.48 | 21.91 | 26.85 | 1.31 |
| 17255352 | Dlx3 | distal-less homeobox 3 | 38.40 | 35.32 | 55.85 | 40.36 | 1.31 |
| 17330183 | Stfa3 | stefin A3 | 6.20 | 6.42 | 6.97 | 9.49 | 1.30 |
| 17322827 | | | 256.32 | 200.40 | 309.87 | 285.92 | 1.30 |
| 17303609 | Rarb | retinoic acid receptor, beta | 35.73 | 34.39 | 48.45 | 43.01 | 1.30 |
| 17243866 | | | 12.94 | 18.72 | 19.47 | 21.80 | 1.30 |
| 17493382 | Gm15412 | predicted gene 15412 | 36.26 | 29.91 | 46.45 | 39.80 | 1.30 |
| 17539534 | | | 5.70 | 5.30 | 7.50 | 6.84 | 1.30 |
| 17211294 | Gdap1 | ganglioside-induced differentiation-associated-protein 1 | 8.34 | 7.53 | 10.88 | 9.79 | 1.30 |
| 17359583 | Cnnm1 | cyclin M1 | 16.98 | 16.13 | 23.48 | 19.66 | 1.30 |
| 17395193 | | | 9.24 | 8.96 | 11.91 | 11.81 | 1.30 |
| 17538318 | | | 9.79 | 9.43 | 11.33 | 13.70 | 1.30 |
| 17459455 | Fabp1 | fatty acid binding protein 1, liver | 902.62 | 696.07 | 847.56 | 1234.92 | 1.30 |
| 17291076 | Vmn1r202 | vomeronasal 1 receptor 202 | 5.18 | 5.92 | 8.23 | 6.23 | 1.30 |
| 17251328 | Pik3r6 | phosphoinositide-3-kinase, regulatory subunit 6 | 21.86 | 19.71 | 27.46 | 26.66 | 1.30 |
| 17324616 | | | 11.90 | 9.79 | 18.44 | 9.80 | 1.30 |
| 17284539 | | | 18.76 | 22.81 | 28.65 | 25.46 | 1.30 |
| 17355058 | | | 50.62 | 48.99 | 81.76 | 47.86 | 1.30 |
| 17479967 | Vmn2r79 | vomeronasal 2, receptor 79 | 72.17 | 64.78 | 100.47 | 77.73 | 1.30 |
| 17286958 | Gm9817 | predicted gene 9817 | 22.96 | 23.63 | 32.54 | 28.02 | 1.30 |
| 17227532 | | | 25.96 | 17.05 | 28.94 | 26.98 | 1.30 |
| 17430654 | | | 42.04 | 49.94 | 58.93 | 60.63 | 1.30 |
| 17490695 | Dkkl1 | dickkopf-like 1 | 9.30 | 10.15 | 11.83 | 13.43 | 1.30 |
| 17514340 | Gm10718 | predicted gene 10718 | 44.69 | 32.42 | 54.60 | 45.58 | 1.30 |
| 17269218 | Gm14188 | predicted gene 14188 | 32.76 | 25.69 | 38.27 | 37.66 | 1.30 |
| 17337574 | Olfr109 | olfactory receptor 109 | 9.67 | 8.65 | 13.16 | 10.64 | 1.30 |
| 17543870 | Zdhhc15 | zinc finger, DHHC domain containing 15 | 69.20 | 52.83 | 74.29 | 84.22 | 1.30 |
| 17239773 | Gm15270 | predicted gene 15270 | 12.36 | 13.82 | 17.33 | 16.67 | 1.30 |
| 17543623 | | | 5.60 | 5.14 | 6.66 | 7.29 | 1.30 |
| 17548577 | | | 28.40 | 26.83 | 33.80 | 37.92 | 1.30 |
| 17531799 | Mir128-2 | microRNA 128-2 | 11.80 | 8.73 | 9.75 | 16.90 | 1.30 |
| 17296007 | | | 14.13 | 11.84 | 17.72 | 15.98 | 1.30 |
| 17235941 | Chst11 | carbohydrate sulfotransferase 11 | 52.48 | 66.05 | 68.98 | 84.84 | 1.30 |
| 17362521 | 5730408K05Rik | RIKEN cDNA 5730408K05 gene | 109.50 | 119.60 | 146.96 | 150.38 | 1.30 |
| 17548786 | | | 11.02 | 9.18 | 9.93 | 16.29 | 1.30 |
| 17531256 | | | 6.00 | 8.36 | 8.04 | 10.59 | 1.30 |
| 17462131 | Olfr211 | olfactory receptor 211 | 27.93 | 20.38 | 36.68 | 26.00 | 1.30 |
| 17214368 | Cyp27a1 | cytochrome P450, family 27, subfamily a, polypeptide 1 | 53.75 | 60.41 | 78.48 | 69.60 | 1.30 |
| 17546429 | | | 14.09 | 20.67 | 31.91 | 13.18 | 1.30 |
| 17383173 | Surf1 | surfeit gene 1 | 49.20 | 48.45 | 57.58 | 69.03 | 1.30 |
| 17214757 | Gm19537 | predicted gene, 19537 | 16.99 | 16.36 | 19.56 | 23.68 | 1.30 |
| 17284435 | Igh-VJ558 | immunoglobulin heavy chain (J558 family) | 14.71 | 8.12 | 12.16 | 17.41 | 1.30 |
| 17373937 | Rcn1 | reticulocalbin 1 | 104.64 | 82.48 | 136.98 | 105.43 | 1.30 |
| 17398565 | Gm6525 | predicted pseudogene 6525 | 154.11 | 84.30 | 137.62 | 171.22 | 1.30 |
| 17325608 | Cd80 | CD80 antigen | 13.20 | 11.29 | 15.63 | 16.08 | 1.30 |
| 17248664 | Ublcp1 | ubiquitin-like domain containing CTD phosphatase 1 | 56.78 | 53.31 | 47.87 | 94.72 | 1.30 |
| 17349514 | Egr1 | early growth response 1 | 67.13 | 59.34 | 79.66 | 84.14 | 1.30 |
| 17330080 | Dirc2 | disrupted in renal carcinoma 2 (human) | 48.42 | 44.82 | 60.14 | 60.60 | 1.30 |
| 17291085 | Vmn1r206 | vomeronasal 1 receptor 206 | 49.38 | 42.17 | 56.49 | 62.05 | 1.29 |
| 17547265 | | | 8.05 | 9.20 | 10.59 | 11.75 | 1.29 |
| 17382154 | | | 68.82 | 47.61 | 75.39 | 75.35 | 1.29 |
| 17380119 | Cass4 | Cas scaffolding protein family member 4 | 12.15 | 13.72 | 15.65 | 17.84 | 1.29 |
| 17250511 | Smcr8 | Smith-Magenis syndrome chromosome region, candidate 8 homolog (human) | 54.62 | 57.11 | 68.09 | 76.53 | 1.29 |

# Supplementary Table 2

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17233329 | Gm5423 | predicted gene 5423 | 17.69 | 18.28 | 28.17 | 18.38 | 1.29 |
| 17409621 | S1pr1 | sphingosine-1-phosphate receptor 1 | 12.85 | 14.13 | 14.10 | 20.83 | 1.29 |
| 17327655 | Gm15879 | predicted gene 15879 | 9.48 | 9.32 | 11.63 | 12.69 | 1.29 |
| 17361878 | Slc22a20 | solute carrier family 22 (organic anion transporter), member 20 | 18.69 | 17.23 | 21.00 | 25.48 | 1.29 |
| 17239817 | Enpp3 | ectonucleotide pyrophosphatase/phosphodiesterase 3 | 29.74 | 27.66 | 33.82 | 40.45 | 1.29 |
| 17259311 | 0610009L18Rik | RIKEN cDNA 0610009L18 gene | 39.32 | 28.10 | 40.39 | 46.82 | 1.29 |
| 17245751 | Arhgef25 | Rho guanine nucleotide exchange factor (GEF) 25 | 15.36 | 13.42 | 17.63 | 19.60 | 1.29 |
| 17355437 | | | 288.02 | 352.07 | 421.04 | 406.90 | 1.29 |
| 17347896 | | | 27.60 | 27.34 | 36.01 | 35.05 | 1.29 |
| 17393910 | Chd6 | chromodomain helicase DNA binding protein 6 | 37.80 | 42.68 | 54.58 | 49.51 | 1.29 |
| 17525471 | Gm3434 | predicted gene 3434 | 8.79 | 9.73 | 10.84 | 13.12 | 1.29 |
| 17544814 | | | 60.30 | 25.23 | 54.82 | 55.77 | 1.29 |
| 17358503 | Rcl1 | RNA terminal phosphate cyclase-like 1 | 31.83 | 43.06 | 43.28 | 53.55 | 1.29 |
| 17513270 | 4933408N05Rik | RIKEN cDNA 4933408N05 gene | 16.84 | 16.17 | 22.79 | 19.90 | 1.29 |
| 17397875 | Gpr171 | G protein-coupled receptor 171 | 26.19 | 18.04 | 31.56 | 25.62 | 1.29 |
| 17272077 | Gm11721 | predicted gene 11721 | 7.95 | 8.08 | 8.51 | 12.21 | 1.29 |
| 17475695 | Gm10046 | predicted gene 10046 | 25.93 | 23.02 | 33.32 | 29.96 | 1.29 |
| 17522812 | Mir467h | microRNA 467h | 23.20 | 19.50 | 30.16 | 25.05 | 1.29 |
| 17379480 | | | 8.88 | 6.38 | 8.69 | 11.04 | 1.29 |
| 17380911 | 9230112E08Rik | RIKEN cDNA 9230112E08 gene | 18.04 | 17.33 | 19.09 | 26.62 | 1.29 |
| 17537630 | Mir3112 | microRNA 3112 | 19.87 | 16.50 | 25.44 | 21.57 | 1.29 |
| 17337693 | Gm20580 | predicted gene, 20580 | 6.24 | 5.39 | 5.97 | 9.05 | 1.29 |
| 17255485 | | | 43.41 | 49.64 | 73.92 | 46.27 | 1.29 |
| 17249140 | 3010026009Rik | RIKEN cDNA 3010026009 gene | 30.83 | 28.04 | 32.31 | 43.68 | 1.29 |
| 17247921 | Gm6899 | predicted gene 6899 | 19.86 | 26.13 | 26.10 | 33.27 | 1.29 |
| 17402319 | | | 15.99 | 16.19 | 17.19 | 24.34 | 1.29 |
| 17438361 | Cep135 | centrosomal protein 135 | 13.47 | 15.18 | 17.05 | 19.92 | 1.29 |
| 17389571 | Zfp770 | zinc finger protein 770 | 17.07 | 18.31 | 27.70 | 17.96 | 1.29 |
| 17399173 | Gm17146 | predicted gene 17146 | 17.00 | 16.32 | 17.00 | 25.99 | 1.29 |
| 17548965 | LOC100503923 | uncharacterized LOC100503923 | 14.39 | 12.30 | 17.64 | 16.80 | 1.29 |
| 17427181 | Gm12669 | predicted gene 12669 | 17.20 | 11.86 | 21.00 | 16.50 | 1.29 |
| 17367858 | Fam166a | family with sequence similarity 166, member A | 23.07 | 22.31 | 25.88 | 32.67 | 1.29 |
| 17332595 | Prdm15 | PR domain containing 15 | 20.64 | 22.75 | 31.93 | 24.04 | 1.29 |
| 17494228 | Hbb-bs | hemoglobin, beta adult s chain | 19.39 | 15.63 | 23.75 | 21.42 | 1.29 |
| 17496547 | Prrt2 | proline-rich transmembrane protein 2 | 20.43 | 24.43 | 25.81 | 32.02 | 1.29 |
| 17540460 | BC049702 | cDNA sequence BC049702 | 9.87 | 10.25 | 13.32 | 12.61 | 1.29 |
| 17494795 | Olfr488 | olfactory receptor 488 | 8.63 | 7.18 | 9.90 | 10.48 | 1.29 |
| 17349974 | 2010320007Rik | RIKEN cDNA 2010320007 gene | 29.49 | 22.32 | 33.64 | 33.14 | 1.29 |
| 17530920 | Gm16343 | predicted gene 16343 | 10.09 | 10.80 | 16.82 | 10.10 | 1.29 |
| 17362839 | Ms4a10 | membrane-spanning 4-domains, subfamily A, member 10 | 150.41 | 151.80 | 203.69 | 185.73 | 1.29 |
| 17473695 | Gm6909 | predicted gene 6909 | 13.55 | 15.00 | 20.78 | 16.00 | 1.29 |
| 17543691 | Phka1 | phosphorylase kinase alpha 1 | 28.62 | 22.88 | 28.96 | 37.40 | 1.29 |
| 17528615 | | | 10.66 | 8.86 | 17.70 | 7.45 | 1.29 |
| 17412296 | Epha7 | Eph receptor A7 | 16.96 | 17.85 | 20.46 | 24.39 | 1.29 |
| 17451400 | 1700069L16Rik | RIKEN cDNA 1700069L16 gene | 8.74 | 9.92 | 13.78 | 10.25 | 1.29 |
| 17408442 | | | 26.62 | 23.75 | 30.93 | 33.94 | 1.29 |
| 17514355 | | | 82.97 | 52.17 | 100.95 | 73.08 | 1.29 |
| 17451867 | Rfc5 | replication factor C (activator 1) 5 | 46.35 | 49.40 | 55.97 | 67.30 | 1.29 |
| 17500744 | B430010I23Rik | RIKEN cDNA B430010I23 gene | 33.11 | 31.34 | 42.49 | 40.47 | 1.29 |
| 17274480 | | | 6.65 | 6.64 | 9.14 | 7.98 | 1.29 |
| 17390261 | n-R5s205 | nuclear encoded rRNA 5S 205 | 13.61 | 12.20 | 21.55 | 11.65 | 1.29 |
| 17395695 | Gm14342 | predicted gene 14342 | 13.90 | 13.14 | 15.87 | 18.91 | 1.29 |
| 17541067 | Rhox2g | reproductive homeobox 2G | 7.02 | 8.48 | 9.44 | 10.49 | 1.29 |
| 17290904 | Olfr1370 | olfactory receptor 1370 | 13.95 | 13.47 | 16.56 | 18.70 | 1.29 |
| 17503503 | | | 9.26 | 8.37 | 10.49 | 12.19 | 1.29 |
| 17465447 | | | 10.66 | 12.15 | 10.81 | 18.53 | 1.29 |
| 17533806 | Gm4907 | predicted gene 4907 | 13.82 | 8.17 | 10.58 | 17.70 | 1.29 |
| 17265545 | Gm12324 | predicted gene 12324 | 8.30 | 9.04 | 11.25 | 11.03 | 1.29 |
| 17234873 | Vmn2r81 | vomeronasal 2, receptor 81 | 8.96 | 8.28 | 13.74 | 8.42 | 1.29 |
| 17238091 | 1700012D01Rik | RIKEN cDNA 1700012D01 gene | 13.74 | 12.68 | 17.63 | 16.33 | 1.29 |
| 17218594 | Gm10530 | predicted gene 10530 | 15.66 | 15.32 | 19.07 | 20.74 | 1.29 |
| 17484952 | Tspan4 | tetraspanin 4 | 55.34 | 61.06 | 77.67 | 71.89 | 1.28 |
| 17214904 | Gm16028 | predicted gene 16028 | 28.17 | 25.91 | 34.81 | 34.68 | 1.28 |
| 17539123 | | | 4.82 | 4.80 | 6.32 | 6.04 | 1.28 |
| 17286551 | Gm19865 | predicted gene, 19865 | 6.69 | 6.81 | 9.32 | 8.02 | 1.28 |
| 17230960 | Prox1 | prospero-related homeobox 1 | 293.45 | 193.14 | 319.63 | 305.44 | 1.28 |
| 17508848 | | | 14.30 | 15.19 | 18.22 | 19.66 | 1.28 |
| 17255479 | Gm11534 | predicted gene 11534 | 14.24 | 15.36 | 20.02 | 17.99 | 1.28 |
| 17545618 | Ptchd1 | patched domain containing 1 | 20.27 | 21.67 | 28.84 | 25.02 | 1.28 |
| 17257798 | Gm11669 | predicted gene 11669 | 17.55 | 15.06 | 25.89 | 15.98 | 1.28 |
| 17235352 | | | 99.45 | 191.38 | 240.38 | 133.05 | 1.28 |
| 17416347 | Pars2 | prolyl-tRNA synthetase (mitochondrial)(putative) | 13.66 | 14.66 | 16.31 | 20.05 | 1.28 |
| 17307738 | Fzd3 | frizzled homolog 3 (Drosophila) | 14.06 | 14.48 | 17.91 | 18.73 | 1.28 |
| 17312209 | Ly6e | lymphocyte antigen 6 complex, locus E | 353.53 | 263.65 | 367.54 | 424.64 | 1.28 |
| 17529981 | Foxl2os | forkhead box L2 opposite strand transcript | 9.27 | 10.46 | 12.85 | 12.47 | 1.28 |
| 17443062 | 4930563F08Rik | RIKEN cDNA 4930563F08 gene | 7.76 | 7.48 | 11.27 | 8.29 | 1.28 |
| 17535644 | Plxnb3 | plexin B3 | 15.11 | 14.39 | 16.98 | 20.88 | 1.28 |
| 17246404 | Olfr771 | olfactory receptor 771 | 8.67 | 8.78 | 11.29 | 11.10 | 1.28 |
| 17490084 | Gm17768 | predicted gene, 17768 | 6.58 | 5.90 | 9.02 | 6.98 | 1.28 |
| 17545245 | Gm8334 | predicted gene 8334 | 25.56 | 30.94 | 37.15 | 35.33 | 1.28 |
| 17407494 | | | 5.89 | 5.49 | 7.58 | 7.02 | 1.28 |
| 17487489 | Pvr | poliovirus receptor | 28.90 | 28.98 | 39.35 | 34.89 | 1.28 |
| 17442940 | | | 41.20 | 27.28 | 36.68 | 51.14 | 1.28 |
| 17360766 | 1810018F18Rik | RIKEN cDNA 1810018F18 gene | 19.58 | 18.72 | 20.37 | 28.73 | 1.28 |
| 17407531 | Gm10697 | predicted gene 10697 | 7.65 | 7.52 | 9.29 | 10.16 | 1.28 |
| 17366283 | LOC100041877 | nuclear body protein SP140-like | 8.81 | 13.29 | 13.75 | 14.57 | 1.28 |
| 17504391 | | | 6.58 | 8.42 | 8.67 | 10.56 | 1.28 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17486481 | Gm7789 | predicted pseudogene 7789 | 16.67 | 17.40 | 16.27 | 27.37 | 1.28 |
| 17234936 | Hcn2 | hyperpolarization-activated, cyclic nucleotide-gated K+ 2 | 26.39 | 28.32 | 35.28 | 34.82 | 1.28 |
| 17299500 | Olfr743 | olfactory receptor 743 | 9.36 | 8.32 | 13.38 | 9.27 | 1.28 |
| 17393962 | Ptprt | protein tyrosine phosphatase, receptor type, T | 18.16 | 17.95 | 24.47 | 21.79 | 1.28 |
| 17515058 | Ppan | peter pan homolog (Drosophila) | 124.16 | 127.13 | 174.20 | 147.58 | 1.28 |
| 17474785 | Vmn1r148 | vomeronasal 1 receptor 148 | 5.83 | 6.42 | 8.05 | 7.63 | 1.28 |
| 17246038 | Gpr182 | G protein-coupled receptor 182 | 39.39 | 39.89 | 55.69 | 45.81 | 1.28 |
| 17317013 | Gm10020 | predicted pseudogene 10020 | 62.43 | 60.59 | 92.24 | 65.28 | 1.28 |
| 17342991 | | | 13.78 | 23.45 | 25.99 | 21.67 | 1.28 |
| 17521483 | | | 6.76 | 6.81 | 6.62 | 10.75 | 1.28 |
| 17382848 | Gm13553 | predicted gene 13553 | 6.77 | 7.40 | 9.39 | 8.75 | 1.28 |
| 17242957 | | | 54.37 | 33.28 | 55.06 | 57.09 | 1.28 |
| 17280624 | | | 12.79 | 11.35 | 15.07 | 15.81 | 1.28 |
| 17406395 | Arfip1 | ADP-ribosylation factor interacting protein 1 | 54.94 | 65.00 | 70.67 | 82.79 | 1.28 |
| 17383785 | Gm13425 | predicted gene 13425 | 9.30 | 10.38 | 14.72 | 10.46 | 1.28 |
| 17315198 | Mir1941 | microRNA 1941 | 17.94 | 14.22 | 17.82 | 23.31 | 1.28 |
| 17307736 | | | 31.32 | 29.46 | 45.67 | 32.08 | 1.28 |
| 17311138 | Gm15942 | predicted gene 15942 | 8.06 | 8.07 | 11.32 | 9.29 | 1.28 |
| 17262594 | Olfr1373 | olfactory receptor 1373 | 29.95 | 30.33 | 44.13 | 32.93 | 1.28 |
| 17216436 | Serpinb11 | serine (or cysteine) peptidase inhibitor, clade B (ovalbumin), member 11 | 10.70 | 11.34 | 14.54 | 13.63 | 1.28 |
| 17414651 | Zfp618 | zinc finger protein 618 | 32.90 | 43.70 | 53.58 | 44.29 | 1.28 |
| 17435180 | Lhfpl3 | lipoma HMGIC fusion partner-like 3 | 9.52 | 9.40 | 13.79 | 10.38 | 1.28 |
| 17513666 | Trhr2 | thyrotropin releasing hormone receptor 2 | 16.48 | 15.39 | 22.44 | 18.27 | 1.28 |
| 17370350 | Olfr350 | olfactory receptor 350 | 4.64 | 6.18 | 6.39 | 7.43 | 1.28 |
| 17459355 | | | 25.68 | 21.57 | 31.55 | 28.79 | 1.28 |
| 17309412 | Sox21 | SRY-box containing gene 21 | 75.15 | 100.01 | 133.63 | 90.01 | 1.28 |
| 17219684 | Olfr429 | olfactory receptor 429 | 6.61 | 8.13 | 9.34 | 9.49 | 1.28 |
| 17300155 | Traj49 | T cell receptor alpha joining 49 | 7.53 | 7.08 | 9.95 | 8.71 | 1.28 |
| 17462143 | | | 6.00 | 5.82 | 6.56 | 8.52 | 1.28 |
| 17533492 | | | 6.45 | 6.18 | 9.80 | 6.33 | 1.28 |
| 17221914 | Gm20172 | predicted gene, 20172 | 8.40 | 7.23 | 7.61 | 12.33 | 1.28 |
| 17300015 | A430107P09Rik | RIKEN cDNA A430107P09 gene | 62.18 | 47.64 | 72.44 | 67.71 | 1.28 |
| 17446474 | Speer4a | spermatogenesis associated glutamate (E)-rich protein 4a | 74.94 | 63.80 | 101.88 | 75.18 | 1.28 |
| 17220595 | | | 43.58 | 36.02 | 42.79 | 58.79 | 1.28 |
| 17267954 | Epn3 | epsin 3 | 39.76 | 39.89 | 54.66 | 46.97 | 1.28 |
| 17366800 | Mir669g | microRNA 669g | 10.31 | 8.94 | 11.68 | 12.88 | 1.28 |
| 17366836 | Mir669g | microRNA 669g | 10.31 | 8.94 | 11.68 | 12.88 | 1.28 |
| 17511806 | 4930488L21Rik | RIKEN cDNA 4930488L21 gene | 32.33 | 33.22 | 34.93 | 48.71 | 1.28 |
| 17395057 | Gm20490 | predicted gene 20490 | 47.14 | 71.93 | 83.75 | 68.17 | 1.28 |
| 17223813 | Akr1cl | aldo-keto reductase family 1, member C-like | 5.93 | 7.48 | 8.80 | 8.29 | 1.28 |
| 17494408 | Trim30d | tripartite motif-containing 30D | 29.85 | 25.81 | 40.44 | 30.56 | 1.28 |
| 17290288 | Akr1c20 | aldo-keto reductase family 1, member C20 | 6.69 | 7.49 | 10.47 | 7.61 | 1.28 |
| 17354585 | | | 4.82 | 4.74 | 6.33 | 5.88 | 1.28 |
| 17222179 | Lman2l | lectin, mannose-binding 2-like | 36.18 | 31.53 | 42.48 | 43.85 | 1.27 |
| 17387714 | Olfr1096-ps1 | olfactory receptor 1096, pseudogene 1 | 6.08 | 5.19 | 7.16 | 7.21 | 1.27 |
| 17514375 | | | 4.96 | 4.57 | 7.18 | 4.97 | 1.27 |
| 17219639 | Olfr418-ps1 | olfactory receptor 418, pseudogene 1 | 14.73 | 13.57 | 19.46 | 16.62 | 1.27 |
| 17340502 | Serac1 | serine active site containing 1 | 21.93 | 27.94 | 32.95 | 30.62 | 1.27 |
| 17400244 | Lysmd1 | LysM, putative peptidoglycan-binding, domain containing 1 | 106.21 | 88.65 | 113.28 | 135.05 | 1.27 |
| 17387131 | Ccdc141 | coiled-coil domain containing 141 | 70.10 | 58.29 | 87.70 | 75.91 | 1.27 |
| 17548844 | | | 7.37 | 5.49 | 8.34 | 8.03 | 1.27 |
| 17448168 | | | 5.92 | 5.46 | 6.65 | 7.85 | 1.27 |
| 17525163 | Acad8 | acyl-Coenzyme A dehydrogenase family, member 8 | 23.77 | 31.92 | 38.35 | 32.61 | 1.27 |
| 17321918 | Gm5476 | predicted gene 5476 | 11.93 | 11.53 | 17.96 | 11.93 | 1.27 |
| 17394765 | | | 151.74 | 111.82 | 158.78 | 177.01 | 1.27 |
| 17456836 | Zc3hc1 | zinc finger, C3HC type 1 | 32.75 | 28.71 | 35.38 | 42.91 | 1.27 |
| 17548662 | Gm5606 | predicted gene 5606 | 12.25 | 14.18 | 13.76 | 19.91 | 1.27 |
| 17487513 | Vmn1r94 | vomeronasal 1 receptor 94 | 15.64 | 13.53 | 19.42 | 17.73 | 1.27 |
| 17524393 | Zfp426 | zinc finger protein 426 | 21.34 | 21.15 | 26.45 | 27.67 | 1.27 |
| 17435725 | Il6 | interleukin 6 | 6.22 | 5.86 | 7.03 | 8.35 | 1.27 |
| 17289279 | | | 11.22 | 10.64 | 12.79 | 15.06 | 1.27 |
| 17516434 | D630033O11Rik | RIKEN cDNA D630033O11 gene | 21.68 | 20.97 | 30.48 | 23.83 | 1.27 |
| 17335900 | | | 17.20 | 14.59 | 20.67 | 19.80 | 1.27 |
| 17406264 | Gm10710 | predicted gene 10710 | 12.03 | 13.22 | 13.82 | 18.33 | 1.27 |
| 17415711 | A730085A09Rik | RIKEN cDNA A730085A09 gene | 25.51 | 19.88 | 27.23 | 30.53 | 1.27 |
| 17261517 | Efcab9 | EF-hand calcium binding domain 9 | 8.38 | 9.20 | 11.53 | 10.84 | 1.27 |
| 17341350 | Vmn1r232 | vomeronasal 1 receptor 232 | 6.05 | 6.41 | 8.25 | 7.60 | 1.27 |
| 17322453 | Olfr161 | olfactory receptor 161 | 9.99 | 8.60 | 12.06 | 11.60 | 1.27 |
| 17359419 | A130015J22Rik | RIKEN cDNA A130015J22 gene | 12.28 | 12.69 | 15.95 | 15.81 | 1.27 |
| 17302565 | 4930449E01Rik | RIKEN cDNA 4930449E01 gene | 12.24 | 12.04 | 16.73 | 14.15 | 1.27 |
| 17399081 | Gm6821 | predicted gene 6821 | 17.15 | 15.80 | 19.93 | 21.98 | 1.27 |
| 17278261 | Serpina3b | serine (or cysteine) peptidase inhibitor, clade A, member 3B / | 8.10 | 8.46 | 9.68 | 11.38 | 1.27 |
| 17252845 | Snord91a | small nucleolar RNA, C/D box 91A | 7.47 | 6.56 | 9.17 | 8.69 | 1.27 |
| 17476239 | LOC101056654 | uncharacterized LOC101056654 | 17.62 | 19.12 | 24.78 | 21.95 | 1.27 |
| 17546259 | Uba1y | ubiquitin-activating enzyme, Chr Y | 8.55 | 8.39 | 8.89 | 12.65 | 1.27 |
| 17274310 | Hpcal1 | hippocalcin-like 1 | 25.67 | 41.47 | 32.08 | 53.30 | 1.27 |
| 17472676 | | | 16.33 | 12.54 | 18.09 | 18.63 | 1.27 |
| 17284654 | | | 36.29 | 49.34 | 62.21 | 46.68 | 1.27 |
| 17369838 | Gm13412 | predicted gene 13412 | 10.18 | 8.39 | 11.71 | 11.91 | 1.27 |
| 17435053 | A630072M18Rik | RIKEN cDNA A630072M18 gene | 19.28 | 18.63 | 24.50 | 23.69 | 1.27 |
| 17245890 | Inhbe | inhibin beta E | 7.72 | 9.33 | 13.01 | 8.66 | 1.27 |
| 17260806 | | | 11.14 | 8.05 | 9.65 | 14.74 | 1.27 |
| 17281402 | | | 35.69 | 28.55 | 44.64 | 36.98 | 1.27 |
| 17381071 | Gm16119 | predicted gene 16119 | 21.65 | 24.70 | 35.30 | 23.57 | 1.27 |
| 17249355 | D930048N14Rik | RIKEN cDNA D930048N14 gene | 37.98 | 46.24 | 50.16 | 56.79 | 1.27 |
| 17422066 | Plekhg5 | pleckstrin homology domain containing, family G (with RhoGef domain) member 5 | 36.58 | 44.58 | 57.04 | 46.01 | 1.27 |
| 17387697 | Olfr1084 | olfactory receptor 1084 | 7.97 | 6.71 | 10.51 | 8.13 | 1.27 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17354428 | | | 28.60 | 17.75 | 42.87 | 15.97 | 1.27 |
| 17335788 | | | 8.56 | 8.24 | 10.51 | 10.81 | 1.27 |
| 17366778 | | | 5.92 | 6.53 | 8.77 | 7.04 | 1.27 |
| 17389281 | Olfr1297 | olfactory receptor 1297 | 12.18 | 11.31 | 16.65 | 13.17 | 1.27 |
| 17326391 | | | 19.23 | 16.82 | 21.49 | 24.25 | 1.27 |
| 17499579 | Spag11b | sperm associated antigen 11B | 12.04 | 10.27 | 14.59 | 13.71 | 1.27 |
| 17214126 | Rufy4 | RUN and FYVE domain containing 4 | 22.92 | 27.09 | 33.02 | 30.41 | 1.27 |
| 17376119 | Chchd5 | coiled-coil-helix-coiled-coil-helix domain containing 5 | 44.12 | 47.86 | 46.67 | 69.97 | 1.27 |
| 17316348 | Snord123 | small nucleolar RNA, C/D box 123 | 54.03 | 66.61 | 94.50 | 58.49 | 1.27 |
| 17475081 | Ceacam10 | carcinoembryonic antigen-related cell adhesion molecule 10 | 18.69 | 16.35 | 25.16 | 19.27 | 1.27 |
| 17471324 | Itfg2 | integrin alpha FG-GAP repeat containing 2 | 40.43 | 33.29 | 43.90 | 49.56 | 1.27 |
| 17311142 | | | 29.34 | 20.40 | 24.42 | 38.63 | 1.27 |
| 17344694 | Gm10499 | predicted gene 10499 | 17.30 | 12.18 | 20.47 | 16.91 | 1.27 |
| 17351196 | Apcdd1 | adenomatosis polyposis coli down-regulated 1 | 28.08 | 30.78 | 45.92 | 28.69 | 1.27 |
| 17514836 | Taf1d | TATA box binding protein (Tbp)-associated factor, RNA polymerase I, D | 731.61 | 839.86 | 969.99 | 1021.67 | 1.27 |
| 17288059 | | | 731.61 | 839.86 | 969.99 | 1021.67 | 1.27 |
| 17415391 | Gm12609 | predicted gene 12609 | 6.83 | 6.03 | 7.90 | 8.41 | 1.27 |
| 17211256 | | | 45.61 | 28.42 | 36.32 | 57.49 | 1.27 |
| 17288246 | LOC100861707 | zinc finger protein 709-like | 6.37 | 7.40 | 8.45 | 9.00 | 1.27 |
| 17412202 | Faxc | failed axon connections homolog (Drosophila) | 12.78 | 17.73 | 21.31 | 17.35 | 1.27 |
| 17469634 | | | 5.61 | 5.32 | 7.80 | 6.06 | 1.27 |
| 17465270 | | | 16.73 | 13.63 | 15.06 | 23.40 | 1.27 |
| 17440971 | Gm13790 | predicted gene 13790 | 18.07 | 19.21 | 27.02 | 20.21 | 1.27 |
| 17458003 | Olfr437 | olfactory receptor 437 | 18.73 | 16.10 | 19.92 | 24.21 | 1.27 |
| 17472111 | Gm6728 | predicted gene 6728 | 12.16 | 14.79 | 13.97 | 20.16 | 1.27 |
| 17353215 | Rpl29-ps5 | ribosomal protein L29, pseudogene 5 | 42.28 | 50.52 | 51.80 | 65.73 | 1.27 |
| 17287336 | | | 195.21 | 235.15 | 242.00 | 302.92 | 1.27 |
| 17387678 | Olfr1065 | olfactory receptor 1065 | 5.84 | 5.27 | 8.20 | 5.87 | 1.27 |
| 17511069 | Nanos3 | nanos homolog 3 (Drosophila) | 69.68 | 55.47 | 98.06 | 60.31 | 1.27 |
| 17317708 | Mir30d | microRNA 30d | 33.58 | 31.84 | 43.70 | 39.09 | 1.27 |
| 17382098 | Gm13335 | predicted gene 13335 | 7.20 | 7.37 | 7.83 | 10.60 | 1.27 |
| 17293813 | | | 12.68 | 11.32 | 16.38 | 13.99 | 1.27 |
| 17500494 | | | 32.72 | 44.33 | 47.99 | 49.47 | 1.26 |
| 17287957 | Spata31d1b | spermatogenesis associated 31 subfamily D, member 1B | 8.41 | 7.78 | 9.11 | 11.37 | 1.26 |
| 17535915 | Gm5936 | predicted gene 5936 | 146.98 | 84.68 | 161.89 | 131.05 | 1.26 |
| 17516908 | Apoa4 | apolipoprotein A-IV | 510.21 | 559.98 | 723.59 | 629.70 | 1.26 |
| 17387694 | Olfr1082 | olfactory receptor 1082 | 5.97 | 6.04 | 7.00 | 8.17 | 1.26 |
| 17361285 | Syt12 | synaptotagmin XII | 77.07 | 98.49 | 125.98 | 95.98 | 1.26 |
| 17448170 | | | 37.64 | 27.83 | 42.43 | 40.35 | 1.26 |
| 17244864 | Nav3 | neuron navigator 3 | 16.55 | 15.40 | 18.72 | 21.66 | 1.26 |
| 17437490 | Rbpj | recombination signal binding protein for immunoglobulin kappa J region | 11.85 | 10.99 | 13.03 | 15.85 | 1.26 |
| 17536950 | 1700018G05Rik | RIKEN cDNA 1700018G05 gene | 8.20 | 8.05 | 12.48 | 8.05 | 1.26 |
| 17360305 | AA387883 | expressed sequence AA387883 | 10.94 | 10.54 | 12.93 | 14.20 | 1.26 |
| 17491695 | | | 21.19 | 17.96 | 27.81 | 21.66 | 1.26 |
| 17252875 | 1700016P03Rik | RIKEN cDNA 1700016P03 gene | 14.63 | 13.98 | 17.05 | 19.09 | 1.26 |
| 17548973 | Pten | phosphatase and tensin homolog | 18.91 | 13.40 | 15.47 | 25.34 | 1.26 |
| 17363156 | | | 192.11 | 59.22 | 173.42 | 144.00 | 1.26 |
| 17363158 | | | 192.11 | 59.22 | 173.42 | 144.00 | 1.26 |
| 17247627 | Tmem17 | transmembrane protein 17 | 10.86 | 10.97 | 14.39 | 13.17 | 1.26 |
| 17357715 | | | 6.72 | 7.88 | 8.75 | 9.69 | 1.26 |
| 17440457 | | | 78.20 | 60.49 | 81.66 | 93.41 | 1.26 |
| 17443166 | Stx1a | syntaxin 1A (brain) | 47.16 | 43.03 | 59.20 | 54.64 | 1.26 |
| 17526633 | LOC100502818 | uncharacterized LOC100502818 | 494.59 | 596.16 | 746.38 | 630.24 | 1.26 |
| 17273191 | Alyref | Aly/REF export factor | 14.38 | 15.14 | 18.87 | 18.39 | 1.26 |
| 17437565 | | | 11.04 | 14.64 | 15.35 | 17.05 | 1.26 |
| 17337557 | H2-M3 | histocompatibility 2, M region locus 3 | 14.76 | 17.20 | 20.77 | 19.56 | 1.26 |
| 17342999 | Cpne5 | copine V | 14.85 | 14.07 | 21.64 | 14.85 | 1.26 |
| 17487270 | | | 18.86 | 28.57 | 29.61 | 30.22 | 1.26 |
| 17268817 | | | 222.04 | 269.61 | 306.50 | 313.61 | 1.26 |
| 17222070 | Mir5103 | microRNA 5103 | 8.33 | 11.90 | 14.96 | 10.55 | 1.26 |
| 17469797 | Ghrl | ghrelin | 46.47 | 35.78 | 51.11 | 52.61 | 1.26 |
| 17337381 | Gm19684 | predicted gene, 19684 | 18.92 | 16.51 | 22.43 | 22.24 | 1.26 |
| 17387742 | Olfr259 | olfactory receptor 259 | 13.80 | 15.73 | 19.48 | 17.74 | 1.26 |
| 17377065 | Zfp133-ps | zinc finger protein 133, pseudogene | 15.91 | 14.78 | 22.42 | 16.26 | 1.26 |
| 17481332 | Olfr663 | olfactory receptor 663 | 8.77 | 5.93 | 9.23 | 9.29 | 1.26 |
| 17264090 | Gm12284 | predicted gene 12284 | 14.52 | 13.88 | 20.56 | 15.22 | 1.26 |
| 17476604 | Scgb2b2 | secretoglobin, family 2B, member 2 | 6.21 | 5.40 | 7.65 | 6.97 | 1.26 |
| 17487102 | | | 16.96 | 14.12 | 22.55 | 16.59 | 1.26 |
| 17333505 | Gm3435 | predicted gene 3435 | 25.30 | 29.91 | 31.36 | 38.17 | 1.26 |
| 17240577 | Gm15199 | predicted gene 15199 | 33.15 | 37.92 | 39.21 | 50.29 | 1.26 |
| 17363817 | A930007I19Rik | RIKEN cDNA A930007I19 gene | 11.22 | 11.43 | 13.59 | 14.94 | 1.26 |
| 17366728 | Mir669d | microRNA 669d | 83.61 | 51.14 | 86.22 | 83.46 | 1.26 |
| 17439159 | Gm20500 | predicted gene 20500 | 14.88 | 17.68 | 20.65 | 20.35 | 1.26 |
| 17363129 | Olfr1447 | olfactory receptor 1447 | 6.84 | 6.48 | 9.27 | 7.50 | 1.26 |
| 17324772 | | | 9.28 | 10.45 | 14.27 | 10.56 | 1.26 |
| 17421437 | LOC101056605 | zinc finger protein 708-like | 8.02 | 7.29 | 11.65 | 7.62 | 1.26 |
| 17285821 | Hist1h3g | histone cluster 1, H3g | 8.86 | 6.50 | 9.55 | 9.80 | 1.26 |
| 17325721 | | | 43.46 | 19.37 | 32.74 | 46.36 | 1.26 |
| 17214899 | Gm7609 | predicted pseudogene 7609 | 31.52 | 43.87 | 42.15 | 52.76 | 1.26 |
| 17426926 | Gm12414 | predicted gene 12414 | 15.07 | 14.61 | 20.30 | 17.06 | 1.26 |
| 17281071 | Gpr33 | G protein-coupled receptor 33 | 8.59 | 8.29 | 9.40 | 11.85 | 1.26 |
| 17540521 | Cfp | complement factor properdin | 41.03 | 38.68 | 50.92 | 49.40 | 1.26 |
| 17335312 | Fance | Fanconi anemia, complementation group E | 45.13 | 41.64 | 50.81 | 58.41 | 1.26 |
| 17311789 | Rnf139 | ring finger protein 139 | 27.86 | 21.36 | 30.50 | 31.45 | 1.26 |
| 17516960 | Cadm1 | cell adhesion molecule 1 | 52.07 | 40.05 | 52.51 | 63.41 | 1.26 |
| 17367740 | Zmynd19 | zinc finger, MYND domain containing 19 | 26.32 | 22.51 | 31.64 | 29.79 | 1.26 |
| 17305520 | Ear1 | eosinophil-associated, ribonuclease A family, member 1 | 6.77 | 7.15 | 9.68 | 7.83 | 1.26 |

**Supplementary Table 2**

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17367738 | | | 36.95 | 26.79 | 39.24 | 40.95 | 1.26 |
| 17531286 | Gm7628 | predicted gene 7628 | 22.83 | 26.76 | 29.68 | 32.71 | 1.26 |
| 17464776 | Rpa3 | replication protein A3 | 55.29 | 86.29 | 74.29 | 103.82 | 1.26 |
| 17535191 | | | 231.55 | 168.55 | 251.26 | 252.05 | 1.26 |
| 17492890 | n-R5s154 | nuclear encoded rRNA 5S 154 | 16.23 | 22.46 | 15.83 | 32.84 | 1.26 |
| 17384689 | Gm13584 | predicted gene 13584 | 7.64 | 8.55 | 11.40 | 8.96 | 1.26 |
| 17545567 | Magea2 | melanoma antigen, family A, 2 | 6.31 | 6.45 | 9.40 | 6.64 | 1.26 |
| 17515729 | Prdm10 | PR domain containing 10 | 23.28 | 33.34 | 37.50 | 33.70 | 1.26 |
| 17463806 | Gm8994 | predicted gene 8994 | 49.94 | 52.04 | 56.49 | 71.73 | 1.26 |
| 17387778 | Olfr1141 | olfactory receptor 1141 | 11.51 | 11.19 | 14.99 | 13.54 | 1.26 |
| 17505197 | Cirh1a | cirrhosis, autosomal recessive 1A (human) | 71.82 | 74.08 | 82.66 | 100.70 | 1.26 |
| 17368546 | Gm13421 | predicted gene 13421 | 11.20 | 10.77 | 11.23 | 16.38 | 1.26 |
| 17535532 | Gm5639 | predicted pseudogene 5639 | 18.22 | 22.63 | 25.04 | 26.28 | 1.26 |
| 17481190 | Olfr597 | olfactory receptor 597 | 4.64 | 4.80 | 6.50 | 5.36 | 1.26 |
| 17316153 | Acot10 | acyl-CoA thioesterase 10 | 49.29 | 37.59 | 48.89 | 60.25 | 1.26 |
| 17404230 | Gm5150 | predicted gene 5150 | 8.82 | 7.39 | 11.33 | 9.03 | 1.26 |
| 17548338 | Tmeff1 | transmembrane protein with EGF-like and two follistatin-like doma | 21.72 | 17.54 | 25.17 | 24.14 | 1.26 |
| 17503703 | Rps6-ps2 | ribosomal protein S6, pseudogene 2 | 17.66 | 23.29 | 20.03 | 31.40 | 1.26 |
| 17402400 | Gm9372 | predicted gene 9372 | 25.73 | 22.75 | 34.43 | 26.46 | 1.26 |
| 17415432 | | | 148.23 | 120.53 | 166.81 | 170.70 | 1.26 |
| 17379887 | | | 69.54 | 39.84 | 72.53 | 64.81 | 1.26 |
| 17378149 | Bpifb1 | BPI fold containing family B, member 1 | 217.55 | 113.63 | 152.84 | 262.97 | 1.26 |
| 17240089 | Tpd52l1 | tumor protein D52-like 1 | 36.01 | 52.36 | 52.99 | 57.96 | 1.26 |
| 17343176 | Tff1 | trefoil factor 1 | 80.33 | 71.56 | 91.51 | 99.17 | 1.26 |
| 17310528 | | | 7.67 | 7.14 | 9.27 | 9.32 | 1.26 |
| 17283641 | Serpina1e | serine (or cysteine) peptidase inhibitor, clade A, member 1E | 40.13 | 47.52 | 46.75 | 63.28 | 1.26 |
| 17427488 | I0C0044D17Rik | RIKEN cDNA I0C0044D17 gene | 7.65 | 8.98 | 12.01 | 8.85 | 1.26 |
| 17272969 | Mir338 | microRNA 338 | 17.94 | 13.40 | 20.21 | 19.12 | 1.26 |
| 17307280 | Phf11b | PHD finger protein 11B | 39.36 | 25.79 | 46.23 | 35.54 | 1.26 |
| 17321336 | Wnt10b | wingless related MMTV integration site 10b | 11.36 | 12.99 | 15.12 | 15.44 | 1.25 |
| 17232786 | Wasf1 | WAS protein family, member 1 | 17.85 | 13.88 | 21.08 | 18.74 | 1.25 |
| 17506065 | | | 6.62 | 5.31 | 7.44 | 7.53 | 1.25 |
| 17494822 | Nlrp10 | NLR family, pyrin domain containing 10 | 13.60 | 12.38 | 17.50 | 15.09 | 1.25 |
| 17319339 | Cbx6 | chromobox homolog 6 | 27.99 | 28.41 | 38.23 | 32.53 | 1.25 |
| 17313911 | Trmu | tRNA 5-methylaminomethyl-2-thiouridylate methyltransferase | 16.72 | 16.02 | 21.48 | 19.58 | 1.25 |
| 17303333 | Gm3476 | predicted gene 3476 | 7.04 | 7.04 | 9.28 | 8.37 | 1.25 |
| 17294544 | Atp5c1-ps | ATP synthase, H+ transporting, mitochondrial F1 complex, gamm | 7.53 | 7.68 | 9.82 | 9.26 | 1.25 |
| 17344892 | Olfr113 | olfactory receptor 113 | 10.33 | 8.83 | 14.04 | 9.97 | 1.25 |
| 17299268 | Cdkn3 | cyclin-dependent kinase inhibitor 3 | 79.65 | 75.24 | 83.03 | 111.16 | 1.25 |
| 17283475 | Mir1936 | microRNA 1936 | 9.61 | 9.40 | 13.03 | 10.80 | 1.25 |
| 17350581 | 1700034E13Rik | RIKEN cDNA 1700034E13 gene | 9.94 | 11.63 | 13.71 | 13.34 | 1.25 |
| 17239985 | | | 131.28 | 97.62 | 149.30 | 137.62 | 1.25 |
| 17300181 | Trav9d-3 | T cell receptor alpha variable 9D-3 | 7.02 | 7.47 | 9.75 | 8.42 | 1.25 |
| 17534982 | Gpr112 | G protein-coupled receptor 112 | 9.15 | 9.14 | 12.00 | 10.93 | 1.25 |
| 17389820 | Dnajc17 | DnaJ (Hsp40) homolog, subfamily C, member 17 | 25.66 | 26.38 | 30.12 | 35.11 | 1.25 |
| 17300030 | | | 7.86 | 8.62 | 11.25 | 9.39 | 1.25 |
| 17387624 | Olfr1019 | olfactory receptor 1019 | 6.85 | 6.35 | 8.45 | 8.09 | 1.25 |
| 17457052 | 9430029A11Rik | RIKEN cDNA 9430029A11 gene | 29.22 | 27.08 | 34.11 | 36.45 | 1.25 |
| 17458924 | Vmn1r4 | vomeronasal 1 receptor 4 | 25.99 | 16.73 | 20.68 | 32.86 | 1.25 |
| 17307096 | Zmym5 | zinc finger, MYM-type 5 | 24.93 | 21.96 | 27.98 | 30.78 | 1.25 |
| 17336031 | | | 16.41 | 15.14 | 23.61 | 15.92 | 1.25 |
| 17390530 | Strc | stereocilin | 12.59 | 11.34 | 17.30 | 12.68 | 1.25 |
| 17299621 | Gm5622 | predicted gene 5622 | 20.73 | 21.82 | 30.13 | 23.17 | 1.25 |
| 17541125 | Rhox9 | reproductive homeobox 9 | 22.04 | 22.35 | 30.01 | 25.60 | 1.25 |
| 17547692 | | | 8.82 | 6.99 | 8.77 | 11.04 | 1.25 |
| 17473810 | Zfp324 | zinc finger protein 324 | 18.76 | 20.43 | 22.16 | 26.93 | 1.25 |
| 17467522 | | | 7.83 | 9.01 | 9.35 | 11.74 | 1.25 |
| 17480489 | | | 8.19 | 8.14 | 8.74 | 11.71 | 1.25 |
| 17310827 | Fam173b | family with sequence similarity 173, member B | 30.76 | 30.87 | 35.65 | 41.54 | 1.25 |
| 17371616 | Sp5 | trans-acting transcription factor 5 | 44.07 | 51.77 | 64.55 | 55.48 | 1.25 |
| 17416596 | 4930407G08Rik | RIKEN cDNA 4930407G08 gene | 22.80 | 21.37 | 31.00 | 24.31 | 1.25 |
| 17480028 | | | 6.77 | 6.08 | 8.65 | 7.45 | 1.25 |
| 17330850 | | | 153.43 | 151.05 | 191.03 | 190.09 | 1.25 |
| 17256910 | BC030867 | cDNA sequence BC030867 | 24.22 | 21.15 | 34.95 | 21.85 | 1.25 |
| 17299910 | Trav12-2 | T cell receptor alpha variable 12-2 | 173.99 | 129.39 | 194.72 | 184.99 | 1.25 |
| 17278848 | Mir539 | microRNA 539 | 197.50 | 139.24 | 222.44 | 199.01 | 1.25 |
| 17387846 | Olfr1196 | olfactory receptor 1196 | 6.65 | 8.09 | 8.31 | 10.13 | 1.25 |
| 17481960 | Arntl | aryl hydrocarbon receptor nuclear translocator-like | 32.00 | 37.53 | 46.46 | 40.56 | 1.25 |
| 17310882 | Cpq | carboxypeptidase Q | 21.85 | 18.99 | 24.32 | 26.80 | 1.25 |
| 17240971 | Edar | ectodysplasin-A receptor | 15.72 | 18.03 | 22.66 | 19.57 | 1.25 |
| 17525418 | Hyls1 | hydrolethalus syndrome 1 | 30.39 | 22.21 | 18.14 | 18.50 | 0.70 |
| 17424461 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 45.66 | 79.08 | 43.50 | 43.34 | 0.70 |
| 17224771 | Serpine2 | serine (or cysteine) peptidase inhibitor, clade E, member 2 | 71.10 | 68.19 | 30.28 | 66.58 | 0.70 |
| 17337122 | H2-Q6 | histocompatibility 2, Q region locus 6 | 48.13 | 54.85 | 39.34 | 32.24 | 0.70 |
| 17467474 | | | 12.94 | 12.30 | 9.04 | 8.50 | 0.70 |
| 17371053 | Gm13572 | predicted gene 13572 | 20.76 | 15.28 | 11.27 | 13.78 | 0.69 |
| 17467534 | | | 8.26 | 10.46 | 6.29 | 6.72 | 0.69 |
| 17432496 | | | 12.90 | 7.65 | 7.35 | 6.93 | 0.69 |
| 17284913 | Tubal3 | tubulin, alpha-like 3 | 23.34 | 27.78 | 17.81 | 17.72 | 0.69 |
| 17282435 | Numb | numb gene homolog (Drosophila) | 63.22 | 70.56 | 43.02 | 49.90 | 0.69 |
| 17288014 | | | 24.64 | 12.43 | 14.46 | 11.28 | 0.69 |
| 17214729 | Serpine2 | serine (or cysteine) peptidase inhibitor, clade E, member 2 | 985.40 | 1303.97 | 535.47 | 1054.25 | 0.69 |
| 17298775 | Anxa8 | annexin A8 | 61.44 | 65.05 | 39.91 | 47.90 | 0.69 |
| 17473061 | Dennd5b | DENN/MADD domain containing 5B | 21.86 | 26.39 | 17.93 | 15.56 | 0.69 |
| 17492466 | 2610034B18Rik | RIKEN cDNA 2610034B18 gene | 76.73 | 81.14 | 47.57 | 61.99 | 0.69 |
| 17365098 | Scd1 | stearoyl-Coenzyme A desaturase 1 | 95.05 | 73.88 | 58.65 | 58.59 | 0.69 |
| 17481274 | Trim34a | tripartite motif-containing 34A | 11.05 | 10.43 | 7.16 | 7.75 | 0.69 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17541008 | Snora69 | small nucleolar RNA, H/ACA box 69 | 10.73 | 12.41 | 7.21 | 8.85 | 0.69 |
| 17313581 | | | 52.81 | 47.03 | 36.17 | 33.05 | 0.69 |
| 17316390 | Rpl30 | ribosomal protein L30 | 16.43 | 21.48 | 12.27 | 13.99 | 0.69 |
| 17326814 | | | 23.48 | 12.67 | 12.20 | 12.83 | 0.69 |
| 17548675 | 4930412F12Rik | RIKEN cDNA 4930412F12 gene | 33.68 | 38.82 | 23.83 | 26.36 | 0.69 |
| 17459412 | | | 5.54 | 10.92 | 5.72 | 5.66 | 0.69 |
| 17272939 | A430071A18Rik | RIKEN cDNA A430071A18 gene | 197.36 | 253.17 | 134.15 | 176.74 | 0.69 |
| 17212968 | | | 23.17 | 13.15 | 11.37 | 13.68 | 0.69 |
| 17286882 | Nol7 | nucleolar protein 7 | 74.16 | 94.08 | 57.74 | 58.20 | 0.69 |
| 17506510 | Rpl13 | ribosomal protein L13 | 29.79 | 11.64 | 12.76 | 15.74 | 0.69 |
| 17527661 | Islr | immunoglobulin superfamily containing leucine-rich repeat | 38.48 | 60.02 | 30.67 | 37.08 | 0.69 |
| 17388599 | Ttc17 | tetratricopeptide repeat domain 17 | 39.93 | 36.14 | 24.29 | 28.00 | 0.69 |
| 17317203 | Derl1 | Der1-like domain family, member 1 | 34.87 | 24.91 | 17.86 | 23.23 | 0.69 |
| 17253858 | Atad5 | ATPase family, AAA domain containing 5 | 16.01 | 12.68 | 8.98 | 10.72 | 0.69 |
| 17519673 | Gsta2 | glutathione S-transferase, alpha 2 (Yc2) | 493.38 | 657.91 | 338.11 | 452.15 | 0.69 |
| 17300205 | Traj23 | T cell receptor alpha joining 23 | 9.17 | 11.60 | 6.64 | 7.59 | 0.69 |
| 17525731 | Olfr955 | olfactory receptor 955 | 21.54 | 25.06 | 16.66 | 15.28 | 0.69 |
| 17415302 | Ifnz | interferon zeta | 29.78 | 36.84 | 23.79 | 21.86 | 0.69 |
| 17520820 | | | 8.91 | 14.11 | 7.43 | 8.34 | 0.68 |
| 17353948 | Gnpda1 | glucosamine-6-phosphate deaminase 1 | 22.87 | 23.88 | 16.69 | 15.32 | 0.68 |
| 17518328 | Uchl3 | ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase) | 37.91 | 54.22 | 25.53 | 37.48 | 0.68 |
| 17499788 | Defa26 | defensin, alpha, 26 | 96.97 | 153.07 | 87.31 | 83.40 | 0.68 |
| 17529590 | 9430037G07Rik | RIKEN cDNA 9430037G07 gene | 60.07 | 39.45 | 31.05 | 36.85 | 0.68 |
| 17529557 | | | 60.07 | 39.45 | 31.05 | 36.85 | 0.68 |
| 17212874 | E330011M16Rik | RIKEN cDNA E330011M16 gene | 133.22 | 125.72 | 80.74 | 95.85 | 0.68 |
| 17439464 | Anxa3 | annexin A3 | 72.40 | 89.34 | 50.64 | 59.34 | 0.68 |
| 17339079 | | | 45.13 | 38.62 | 32.32 | 24.63 | 0.68 |
| 17485952 | Isoc2b | isochorismatase domain containing 2b | 23.73 | 26.24 | 16.69 | 17.29 | 0.68 |
| 17344593 | H2-T22 | histocompatibility 2, T region locus 22 | 27.91 | 42.62 | 23.38 | 24.57 | 0.68 |
| 17336314 | | | 15.04 | 9.70 | 10.35 | 6.46 | 0.68 |
| 17232438 | | | 21.54 | 41.97 | 19.02 | 24.12 | 0.68 |
| 17459421 | Igk | immunoglobulin kappa chain complex | 590.29 | 1130.39 | 514.22 | 654.19 | 0.68 |
| 17366734 | mmu-mir-297a-2 | mmu-mir-297a-2 | 13.34 | 16.67 | 10.33 | 10.03 | 0.68 |
| 17467449 | | | 37.61 | 70.51 | 34.26 | 39.09 | 0.68 |
| 17409540 | Amy2a1 | amylase 2a1 | 9.67 | 16.37 | 8.60 | 9.06 | 0.68 |
| 17284450 | Igh-VJ558 | immunoglobulin heavy chain (J558 family) | 6.88 | 12.93 | 5.98 | 7.46 | 0.68 |
| 17317349 | E430025E21Rik | RIKEN cDNA E430025E21 gene | 83.75 | 102.90 | 58.61 | 67.98 | 0.68 |
| 17280528 | | | 5.64 | 14.15 | 7.18 | 6.24 | 0.68 |
| 17308783 | Gm3362 | predicted pseudogene 3362 | 37.98 | 29.81 | 24.07 | 21.88 | 0.68 |
| 17434285 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 53.63 | 82.65 | 50.94 | 41.42 | 0.68 |
| 17333493 | 9030025P20Rik | RIKEN cDNA 9030025P20 gene | 15.98 | 14.23 | 8.62 | 11.85 | 0.68 |
| 17412965 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 45.14 | 83.07 | 44.66 | 42.16 | 0.68 |
| 17413025 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 45.14 | 83.07 | 44.66 | 42.16 | 0.68 |
| 17413123 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 45.14 | 83.07 | 44.66 | 42.16 | 0.68 |
| 17434150 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 45.14 | 83.07 | 44.66 | 42.16 | 0.68 |
| 17447504 | | | 86.24 | 67.04 | 61.76 | 42.02 | 0.68 |
| 17463617 | | | 59.07 | 64.16 | 42.39 | 40.90 | 0.68 |
| 17363505 | Smc5 | structural maintenance of chromosomes 5 | 46.94 | 39.59 | 30.19 | 28.24 | 0.68 |
| 17518312 | Snord16a | small nucleolar RNA, C/D box 16A | 85.89 | 80.17 | 55.43 | 56.69 | 0.68 |
| 17414264 | | | 65.96 | 79.95 | 45.52 | 52.79 | 0.67 |
| 17231086 | | | 23.46 | 23.10 | 12.77 | 18.59 | 0.67 |
| 17436481 | Fgfr3 | fibroblast growth factor receptor 3 | 23.33 | 29.05 | 14.67 | 20.55 | 0.67 |
| 17311058 | | | 41.96 | 40.94 | 28.67 | 27.03 | 0.67 |
| 17314691 | Gm8973 | predicted gene 8973 | 23.33 | 48.76 | 24.44 | 23.97 | 0.67 |
| 17374053 | Kcna4 | potassium voltage-gated channel, shaker-related subfamily, member 4 | 21.65 | 33.73 | 18.18 | 18.99 | 0.67 |
| 17372354 | Ssfa2 | sperm specific antigen 2 | 102.96 | 130.83 | 78.38 | 78.50 | 0.67 |
| 17322829 | Nubp1 | nucleotide binding protein 1 | 95.03 | 114.09 | 69.26 | 71.04 | 0.67 |
| 17244070 | Nr1h4 | nuclear receptor subfamily 1, group H, member 4 | 42.46 | 50.77 | 30.99 | 31.40 | 0.67 |
| 17532627 | mt-Th | mitochondrially encoded tRNA histidine | 103.60 | 89.10 | 35.03 | 93.81 | 0.67 |
| 17254300 | 1100001G20Rik | RIKEN cDNA 1100001G20 gene | 81.16 | 43.84 | 40.05 | 43.46 | 0.67 |
| 17469463 | Rybp | RING1 and YY1 binding protein | 68.73 | 100.93 | 52.10 | 61.24 | 0.67 |
| 17467471 | | | 46.67 | 55.78 | 30.89 | 37.52 | 0.67 |
| 17483770 | | | 16.29 | 10.41 | 8.44 | 9.39 | 0.67 |
| 17444486 | Bri3 | brain protein I3 | 52.34 | 60.18 | 40.86 | 34.25 | 0.67 |
| 17375997 | Mertk | c-mer proto-oncogene tyrosine kinase | 72.20 | 86.55 | 49.33 | 56.55 | 0.67 |
| 17480102 | Sytl2 | synaptotagmin-like 2 | 51.56 | 42.20 | 28.58 | 33.95 | 0.67 |
| 17284482 | | | 57.17 | 61.89 | 37.02 | 42.35 | 0.67 |
| 17397240 | Hspa4l | heat shock protein 4 like | 33.84 | 40.06 | 22.34 | 26.91 | 0.67 |
| 17368515 | Gm17071 | predicted gene 17071 | 27.59 | 29.09 | 19.37 | 18.39 | 0.67 |
| 17491205 | Saa1 | serum amyloid A 1 | 21.61 | 14.60 | 16.12 | 7.98 | 0.67 |
| 17467469 | | | 82.32 | 19.58 | 17.60 | 50.19 | 0.67 |
| 17422697 | Ankrd65 | ankyrin repeat domain 65 | 85.20 | 88.22 | 57.30 | 58.04 | 0.67 |
| 17346528 | C3 | complement component 3 | 128.43 | 72.86 | 56.07 | 77.75 | 0.66 |
| 17467461 | | | 55.62 | 118.34 | 46.65 | 68.98 | 0.66 |
| 17463781 | Emp1 | epithelial membrane protein 1 | 442.20 | 483.53 | 317.24 | 297.15 | 0.66 |
| 17363407 | Anxa1 | annexin A1 | 234.80 | 210.59 | 130.12 | 165.17 | 0.66 |
| 17365030 | Chuk | conserved helix-loop-helix ubiquitous kinase | 72.41 | 61.05 | 47.24 | 41.21 | 0.66 |
| 17401331 | | | 11.90 | 29.54 | 15.51 | 11.94 | 0.66 |
| 17547969 | Gm15798 | predicted gene 15798 | 69.88 | 72.40 | 55.65 | 38.58 | 0.66 |
| 17410939 | Clca3 | chloride channel calcium activated 3 | 202.11 | 131.08 | 85.92 | 134.60 | 0.66 |
| 17375641 | Dut | deoxyuridine triphosphatase | 69.12 | 84.55 | 48.00 | 53.68 | 0.66 |
| 17507308 | Slc10a2 | solute carrier family 10, member 2 | 56.92 | 83.29 | 49.44 | 43.11 | 0.66 |
| 17267418 | A130040M12Rik | RIKEN cDNA A130040M12 gene | 136.62 | 172.59 | 93.71 | 110.32 | 0.66 |
| 17268905 | | | 50.53 | 93.09 | 37.90 | 56.82 | 0.66 |
| 17514482 | Mmp13 | matrix metallopeptidase 13 | 59.42 | 51.18 | 25.37 | 47.57 | 0.66 |
| 17234707 | Gm10272 | predicted gene 10272 | 16.01 | 20.54 | 13.67 | 10.43 | 0.66 |
| 17519658 | Gm3776 | predicted gene 3776 | 186.54 | 191.37 | 90.25 | 158.67 | 0.66 |

**Supplementary Table 2**

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17501204 | | | 21.73 | 36.32 | 20.71 | 17.49 | 0.66 |
| 17305163 | 2610528A11Rik | RIKEN cDNA 2610528A11 gene | 332.29 | 402.67 | 272.60 | 210.88 | 0.66 |
| 17457794 | Tcrb-J | T cell receptor beta, joining region | 33.91 | 26.09 | 14.83 | 24.64 | 0.66 |
| 17383381 | Cel | carboxyl ester lipase | 13.51 | 25.22 | 14.15 | 11.32 | 0.66 |
| 17542021 | Mir505 | microRNA 505 | 150.73 | 59.41 | 66.79 | 71.21 | 0.66 |
| 17548690 | Gm6625 | predicted gene 6625 | 358.91 | 308.80 | 206.12 | 231.73 | 0.66 |
| 17467447 | | | 12.62 | 8.80 | 7.30 | 6.73 | 0.65 |
| 17396260 | Cp | ceruloplasmin | 38.34 | 27.60 | 23.14 | 20.03 | 0.65 |
| 17236747 | 4732465J04Rik | RIKEN cDNA 4732465J04 gene | 18.37 | 32.46 | 16.39 | 16.86 | 0.65 |
| 17413078 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 49.66 | 81.17 | 45.26 | 40.28 | 0.65 |
| 17434230 | Ccl21a | chemokine (C-C motif) ligand 21A (serine) | 49.66 | 81.17 | 45.26 | 40.28 | 0.65 |
| 17341652 | Gm15947 | predicted gene 15947 | 53.83 | 48.18 | 37.55 | 29.14 | 0.65 |
| 17419268 | | | 30.00 | 32.27 | 21.41 | 19.23 | 0.65 |
| 17419270 | | | 30.00 | 32.27 | 21.41 | 19.23 | 0.65 |
| 17488470 | Samd4b | sterile alpha motif domain containing 4B | 88.59 | 122.32 | 67.80 | 69.56 | 0.65 |
| 17465170 | Slc13a1 | solute carrier family 13 (sodium/sulfate symporters), member 1 | 35.78 | 43.63 | 25.46 | 26.20 | 0.65 |
| 17274405 | | | 29.86 | 14.35 | 14.57 | 14.18 | 0.65 |
| 17548178 | Snrpd1 | small nuclear ribonucleoprotein D1 | 21.81 | 14.37 | 11.71 | 11.81 | 0.65 |
| 17314476 | Tmem117 | transmembrane protein 117 | 25.10 | 32.85 | 17.76 | 19.90 | 0.65 |
| 17526576 | Tagln | transgelin | 46.15 | 62.00 | 32.03 | 38.24 | 0.65 |
| 17219242 | Nr1i3 | nuclear receptor subfamily 1, group I, member 3 | 54.48 | 22.48 | 23.47 | 26.52 | 0.65 |
| 17478956 | Gm7551 | predicted gene 7551 | 101.76 | 92.62 | 73.32 | 52.68 | 0.65 |
| 17221662 | Tram2 | translocating chain-associating membrane protein 2 | 41.16 | 52.38 | 22.83 | 37.72 | 0.65 |
| 17489464 | Scn1b | sodium channel, voltage-gated, type I, beta | 31.53 | 30.97 | 21.44 | 19.02 | 0.65 |
| 17329023 | | | 26.49 | 39.75 | 17.01 | 25.85 | 0.65 |
| 17473779 | Zfp128 | zinc finger protein 128 | 26.68 | 22.11 | 16.71 | 14.80 | 0.65 |
| 17315519 | Hoxc6 | homeobox C6 | 19.99 | 25.08 | 15.05 | 14.05 | 0.65 |
| 17344120 | Snord52 | small nucleolar RNA, C/D box 52 | 15.29 | 16.52 | 11.21 | 9.32 | 0.65 |
| 17284652 | | | 7.10 | 12.93 | 7.06 | 5.85 | 0.64 |
| 17340197 | Epas1 | endothelial PAS domain protein 1 | 95.17 | 153.05 | 78.90 | 81.03 | 0.64 |
| 17357148 | Snhg1 | small nucleolar RNA host gene (non-protein coding) 1 | 19.17 | 17.73 | 11.75 | 12.02 | 0.64 |
| 17293571 | Mir3074-1 | microRNA 3074-1 | 34.01 | 13.98 | 16.42 | 14.49 | 0.64 |
| 17521441 | Nat6 | N-acetyltransferase 6 | 80.50 | 118.02 | 62.00 | 65.85 | 0.64 |
| 17366235 | | | 13.14 | 12.50 | 8.07 | 8.44 | 0.64 |
| 17395302 | Gm14402 | predicted gene 14402 | 23.02 | 15.18 | 12.59 | 12.01 | 0.64 |
| 17238834 | | | 32.96 | 19.00 | 17.10 | 16.31 | 0.64 |
| 17442185 | Gm6444 | predicted gene 6444 | 59.26 | 43.10 | 28.31 | 37.49 | 0.64 |
| 17374827 | 1700020I14Rik | RIKEN cDNA 1700020I14 gene | 80.34 | 103.10 | 65.62 | 52.28 | 0.64 |
| 17330323 | Nr1i2 | nuclear receptor subfamily 1, group I, member 2 | 50.00 | 84.59 | 34.82 | 51.56 | 0.64 |
| 17502369 | Olfr372 | olfactory receptor 372 | 12.11 | 17.35 | 9.83 | 9.05 | 0.64 |
| 17476364 | Tyrobp | TYRO protein tyrosine kinase binding protein | 86.89 | 74.70 | 52.87 | 50.64 | 0.64 |
| 17459361 | | | 35.59 | 40.61 | 24.80 | 23.98 | 0.64 |
| 17248127 | | | 29.48 | 38.30 | 20.55 | 22.84 | 0.64 |
| 17459769 | Reg1 | regenerating islet-derived 1 | 103.94 | 177.81 | 60.16 | 119.73 | 0.64 |
| 17298956 | Mat1a | methionine adenosyltransferase I, alpha | 33.81 | 14.56 | 17.44 | 13.44 | 0.64 |
| 17284607 | | | 104.10 | 136.58 | 70.53 | 82.68 | 0.64 |
| 17284631 | | | 104.10 | 136.58 | 70.53 | 82.68 | 0.64 |
| 17399574 | 1700094D03Rik | RIKEN cDNA 1700094D03 gene | 16.12 | 25.61 | 13.65 | 12.81 | 0.63 |
| 17252032 | Med11 | mediator of RNA polymerase II transcription, subunit 11 homolog (S. cerevisiae) | 55.07 | 61.14 | 37.81 | 35.82 | 0.63 |
| 17236096 | Gm8394 | predicted gene 8394 | 105.69 | 56.02 | 59.83 | 42.55 | 0.63 |
| 17318875 | Myh9 | myosin, heavy polypeptide 9, non-muscle | 242.85 | 278.55 | 147.27 | 182.77 | 0.63 |
| 17284533 | | | 14.91 | 50.13 | 14.32 | 26.81 | 0.63 |
| 17311802 | Gm5045 | predicted gene 5045 | 92.13 | 79.53 | 50.15 | 58.41 | 0.63 |
| 17455534 | Gm5566 | predicted pseudogene 5566 | 64.05 | 74.39 | 39.99 | 47.45 | 0.63 |
| 17467389 | | | 82.81 | 103.34 | 51.50 | 65.72 | 0.63 |
| 17284460 | | | 12.96 | 47.42 | 8.52 | 29.50 | 0.63 |
| 17224180 | Igfbp5 | insulin-like growth factor binding protein 5 | 334.65 | 376.66 | 142.08 | 305.73 | 0.63 |
| 17548559 | Emp1 | epithelial membrane protein 1 | 291.78 | 266.79 | 169.80 | 181.85 | 0.63 |
| 17284993 | | | 58.48 | 76.65 | 46.14 | 38.64 | 0.63 |
| 17360695 | Atrnl1 | attractin like 1 | 116.75 | 124.76 | 72.86 | 78.57 | 0.63 |
| 17213591 | | | 45.98 | 37.37 | 15.98 | 36.21 | 0.63 |
| 17482922 | | | 15.47 | 30.47 | 16.62 | 12.09 | 0.62 |
| 17343856 | Btnl5 | butyrophilin-like 5 | 96.80 | 140.64 | 54.16 | 94.21 | 0.62 |
| 17501211 | | | 15.70 | 16.30 | 11.56 | 8.43 | 0.62 |
| 17226622 | Cd55 | CD55 antigen | 83.21 | 71.19 | 43.55 | 52.81 | 0.62 |
| 17448738 | | | 29.01 | 13.14 | 17.55 | 8.76 | 0.62 |
| 17501041 | Casp3 | caspase 3 | 31.15 | 31.06 | 15.16 | 23.65 | 0.62 |
| 17284519 | | | 68.01 | 105.47 | 57.86 | 50.23 | 0.62 |
| 17513978 | | | 122.97 | 92.94 | 67.70 | 66.20 | 0.62 |
| 17513980 | | | 122.97 | 92.94 | 67.70 | 66.20 | 0.62 |
| 17406421 | Arfip1 | ADP-ribosylation factor interacting protein 1 | 32.83 | 35.99 | 13.60 | 29.07 | 0.62 |
| 17424928 | Tomm5 | translocase of outer mitochondrial membrane 5 homolog (yeast) | 11.81 | 21.70 | 10.58 | 10.19 | 0.62 |
| 17459347 | Igk | immunoglobulin kappa chain complex | 66.70 | 137.29 | 46.55 | 79.74 | 0.62 |
| 17284445 | | | 25.88 | 35.74 | 13.17 | 24.96 | 0.62 |
| 17288043 | | | 17.26 | 12.88 | 8.69 | 9.93 | 0.62 |
| 17222777 | Slc40a1 | solute carrier family 40 (iron-regulated transporter), member 1 | 38.79 | 60.42 | 27.59 | 33.61 | 0.62 |
| 17440132 | | | 37.27 | 21.03 | 20.24 | 15.56 | 0.61 |
| 17471357 | Pzp | pregnancy zone protein | 36.53 | 16.32 | 17.82 | 14.62 | 0.61 |
| 17249513 | | | 78.61 | 79.54 | 51.79 | 45.20 | 0.61 |
| 17459403 | | | 26.09 | 22.02 | 16.30 | 13.10 | 0.61 |
| 17324394 | Snord2 | small nucleolar RNA, C/D box 2 | 30.02 | 27.59 | 14.41 | 20.74 | 0.61 |
| 17371708 | Cybrd1 | cytochrome b reductase 1 | 31.08 | 68.31 | 26.55 | 34.01 | 0.61 |
| 17329009 | Iglv1 | immunoglobulin lambda variable 1 | 43.67 | 59.55 | 28.79 | 34.06 | 0.61 |
| 17321683 | Slc11a2 | solute carrier family 11 (proton-coupled divalent metal ion transporters), member 2 | 69.67 | 137.94 | 57.65 | 68.70 | 0.61 |
| 17398499 | Fga | fibrinogen alpha chain | 20.74 | 6.96 | 8.27 | 8.55 | 0.61 |
| 17284667 | | | 8.59 | 23.14 | 8.58 | 10.68 | 0.61 |
| 17279167 | Eif5 | eukaryotic translation initiation factor 5 | 32.21 | 20.21 | 15.26 | 16.49 | 0.61 |

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17352777 | | | 34.69 | 37.45 | 20.78 | 22.78 | 0.60 |
| 17232729 | | | 12.85 | 6.63 | 5.96 | 5.74 | 0.60 |
| 17423289 | | | 10.75 | 15.37 | 7.19 | 8.46 | 0.60 |
| 17507933 | AY761184 | cDNA sequence AY761184 | 254.12 | 435.20 | 217.18 | 195.47 | 0.60 |
| 17357486 | Syt7 | synaptotagmin VII | 21.45 | 42.62 | 19.33 | 18.83 | 0.60 |
| 17316066 | | | 14.28 | 19.41 | 9.14 | 10.90 | 0.60 |
| 17402181 | F3 | coagulation factor III | 197.85 | 282.22 | 137.28 | 147.82 | 0.59 |
| 17495368 | Nup35 | nucleoporin 35 | 29.60 | 25.62 | 21.14 | 11.57 | 0.59 |
| 17467404 | | | 10.13 | 28.45 | 10.75 | 12.01 | 0.59 |
| 17467466 | Igkv4-55 | immunoglobulin kappa variable 4-55 | 74.73 | 135.79 | 70.62 | 53.03 | 0.59 |
| 17476565 | Gm17077 | predicted gene 17077 | 21.07 | 28.78 | 14.28 | 14.95 | 0.59 |
| 17302360 | | | 46.93 | 18.76 | 22.05 | 16.46 | 0.59 |
| 17333938 | Zfp52 | zinc finger protein 52 | 14.20 | 16.08 | 9.17 | 8.58 | 0.59 |
| 17368521 | | | 11.19 | 17.67 | 6.29 | 10.63 | 0.59 |
| 17238900 | | | 24.18 | 28.83 | 14.56 | 16.49 | 0.59 |
| 17505478 | Tat | tyrosine aminotransferase | 68.41 | 86.69 | 56.32 | 34.42 | 0.59 |
| 17465731 | | | 74.65 | 78.59 | 27.72 | 61.84 | 0.58 |
| 17461153 | | | 32.33 | 21.89 | 16.32 | 15.29 | 0.58 |
| 17284602 | | | 12.16 | 14.96 | 6.33 | 9.47 | 0.58 |
| 17449473 | Gc | group specific component | 36.26 | 11.82 | 13.83 | 14.18 | 0.58 |
| 17425900 | Gm2083 | major urinary protein LOC100048885 | 19.88 | 7.11 | 7.80 | 7.92 | 0.58 |
| 17251299 | | | 22.71 | 22.62 | 11.20 | 15.15 | 0.58 |
| 17284527 | | | 11.34 | 20.20 | 10.26 | 8.02 | 0.58 |
| 17532629 | mt-Ts2 | mitochondrially encoded tRNA serine 2 | 34.63 | 30.59 | 10.18 | 27.60 | 0.58 |
| 17305826 | Gm6055 | predicted gene 6055 | 14.59 | 22.48 | 12.15 | 9.31 | 0.58 |
| 17246262 | Rps26 | ribosomal protein S26 | 51.66 | 28.57 | 23.18 | 23.19 | 0.58 |
| 17547897 | Oxct1 | 3-oxoacid CoA transferase 1 | 189.62 | 170.33 | 62.25 | 145.38 | 0.58 |
| 17302617 | Mir17hg | MIR17 host gene 1 (non-protein coding) | 138.05 | 157.33 | 80.42 | 89.78 | 0.58 |
| 17462057 | Gm8203 | predicted pseudogene 8203 | 153.82 | 274.35 | 88.67 | 157.98 | 0.58 |
| 17467392 | Igkv19-93 | immunoglobulin kappa chain variable 19-93 | 46.45 | 52.74 | 19.01 | 38.05 | 0.58 |
| 17318794 | Apol7c | apolipoprotein L 7c | 80.97 | 36.69 | 33.91 | 33.66 | 0.57 |
| 17275750 | | | 69.52 | 93.94 | 57.98 | 35.48 | 0.57 |
| 17400510 | Sf3b4 | splicing factor 3b, subunit 4 | 27.06 | 20.37 | 13.84 | 13.25 | 0.57 |
| 17284354 | Igh-VX24 | immunoglobulin heavy chain (X24 family) | 640.95 | 931.73 | 388.25 | 509.46 | 0.57 |
| 17333658 | Gm6712 | predicted gene 6712 | 21.21 | 16.37 | 9.25 | 12.18 | 0.57 |
| 17245231 | Lyz1 | lysozyme 1 | 496.97 | 616.19 | 278.63 | 355.65 | 0.57 |
| 17462366 | | | 24.95 | 57.13 | 25.03 | 21.65 | 0.57 |
| 17406921 | | | 108.76 | 90.02 | 40.89 | 72.09 | 0.57 |
| 17253181 | Tmigd1 | transmembrane and immunoglobulin domain containing 1 | 49.01 | 102.95 | 43.33 | 42.44 | 0.56 |
| 17284554 | | | 49.11 | 132.53 | 48.79 | 53.63 | 0.56 |
| 17426000 | Gm2083 | major urinary protein LOC100048885 | 20.61 | 7.26 | 7.56 | 8.13 | 0.56 |
| 17449447 | Igj | immunoglobulin joining chain | 330.85 | 611.26 | 254.86 | 270.99 | 0.56 |
| 17513149 | Ctrb1 | chymotrypsinogen B1 | 20.86 | 50.94 | 20.50 | 19.52 | 0.56 |
| 17513974 | | | 19.45 | 17.73 | 10.16 | 10.55 | 0.56 |
| 17313583 | Cyp2d9 | cytochrome P450, family 2, subfamily d, polypeptide 9 | 15.76 | 6.10 | 6.78 | 5.31 | 0.55 |
| 17284633 | Ighm | immunoglobulin heavy constant mu | 115.50 | 281.99 | 95.02 | 124.69 | 0.55 |
| 17386477 | Gm11084 | predicted gene 11084 | 21.57 | 8.64 | 10.55 | 6.11 | 0.55 |
| 17284648 | | | 78.47 | 182.60 | 89.62 | 54.42 | 0.55 |
| 17284562 | | | 42.69 | 66.85 | 32.30 | 28.00 | 0.55 |
| 17308999 | Gm10119 | predicted gene 10119 | 61.38 | 74.30 | 38.72 | 35.49 | 0.55 |
| 17467499 | | | 15.94 | 6.81 | 7.33 | 5.06 | 0.54 |
| 17325661 | | | 13.55 | 14.71 | 7.66 | 7.64 | 0.54 |
| 17467483 | Igkv5-43 | immunoglobulin kappa chain variable 5-43 | 24.82 | 50.45 | 23.74 | 16.78 | 0.54 |
| 17425888 | Gm2083 | major urinary protein LOC100048885 | 23.36 | 7.27 | 8.09 | 8.23 | 0.53 |
| 17426097 | Mup3 | major urinary protein 3 | 22.74 | 8.94 | 8.71 | 8.15 | 0.53 |
| 17302279 | Olfm4 | olfactomedin 4 | 70.86 | 162.76 | 61.07 | 62.53 | 0.53 |
| 17266960 | Ccl6 | chemokine (C-C motif) ligand 6 | 116.89 | 200.18 | 70.09 | 96.95 | 0.53 |
| 17457765 | Prss2 | protease, serine, 2 | 10.24 | 27.19 | 11.20 | 8.38 | 0.52 |
| 17329013 | Iglv1 | immunoglobulin lambda variable 1 | 171.30 | 320.96 | 133.82 | 123.50 | 0.52 |
| 17238840 | | | 32.12 | 41.63 | 17.30 | 21.24 | 0.52 |
| 17426043 | Gm2083 | major urinary protein LOC100048885 | 32.18 | 8.19 | 10.40 | 10.62 | 0.52 |
| 17426032 | Gm2083 | major urinary protein LOC100048885 | 25.79 | 7.44 | 9.18 | 8.07 | 0.52 |
| 17290674 | Gm7040 | predicted gene 7040 | 59.72 | 62.62 | 23.97 | 38.89 | 0.51 |
| 17459409 | | | 15.99 | 49.38 | 24.64 | 8.89 | 0.51 |
| 17284536 | | | 21.16 | 45.92 | 22.77 | 11.58 | 0.51 |
| 17426011 | Gm2083 | major urinary protein LOC100048885 | 25.43 | 7.00 | 8.73 | 7.84 | 0.51 |
| 17459324 | Igkv1-117 | immunoglobulin kappa variable 1-117 | 96.21 | 182.67 | 75.47 | 66.71 | 0.51 |
| 17409526 | Amy2a1 | amylase 2a1 | 10.74 | 29.76 | 10.10 | 10.48 | 0.51 |
| 17417699 | Gm12840 | predicted gene 12840 | 41.95 | 61.07 | 25.22 | 27.10 | 0.51 |
| 17284560 | | | 12.75 | 23.12 | 5.82 | 12.25 | 0.50 |
| 17352366 | | | 14.03 | 14.88 | 6.37 | 8.14 | 0.50 |
| 17239755 | Rps12 | ribosomal protein S12 | 65.33 | 77.09 | 51.86 | 19.47 | 0.50 |
| 17240969 | | | 18.37 | 14.17 | 7.46 | 8.82 | 0.50 |
| 17467398 | Igkv4-91 | immunoglobulin kappa chain variable 4-91 | 73.18 | 54.81 | 22.43 | 41.49 | 0.50 |
| 17398485 | Fgg | fibrinogen gamma chain | 23.88 | 7.57 | 7.87 | 7.83 | 0.50 |
| 17506882 | | | 62.59 | 18.03 | 16.03 | 23.91 | 0.50 |
| 17425915 | Gm2083 | major urinary protein LOC100048885 | 25.50 | 7.13 | 8.37 | 7.74 | 0.49 |
| 17284609 | | | 25.91 | 75.77 | 18.80 | 31.00 | 0.49 |
| 17459417 | Igkj3 | immunoglobulin kappa joining 3 | 30.47 | 65.98 | 24.41 | 22.82 | 0.49 |
| 17290666 | Gm7040 | predicted gene 7040 | 46.49 | 44.41 | 17.97 | 26.16 | 0.49 |
| 17284437 | | | 56.01 | 29.13 | 17.14 | 24.14 | 0.48 |
| 17426062 | Gm2083 | major urinary protein LOC100048885 | 26.32 | 7.15 | 7.99 | 8.24 | 0.48 |
| 17467486 | | | 74.77 | 143.59 | 39.42 | 66.24 | 0.48 |
| 17467410 | Igkv19-93 | immunoglobulin kappa chain variable 19-93 | 22.72 | 34.51 | 14.78 | 12.76 | 0.48 |
| 17284571 | | | 12.92 | 47.50 | 10.33 | 18.50 | 0.48 |
| 17366183 | | | 242.26 | 515.28 | 151.61 | 208.98 | 0.48 |
| 17284379 | Igh-VX24 | immunoglobulin heavy chain (X24 family) | 44.71 | 66.07 | 15.40 | 37.31 | 0.48 |

## Supplementary Table 2

| ID | Gene Symbol | Name | Control 1 | Control 2 | DN-RhoA 1 | DN-RhoA 2 | Fold exp difference (Control/DN-RhoA) |
|---|---|---|---|---|---|---|---|
| 17280184 | Zfp125 | zinc finger protein 125 | 17.20 | 23.03 | 10.86 | 8.26 | 0.48 |
| 17426237 | Ambp | alpha 1 microglobulin/bikunin | 32.69 | 10.66 | 12.10 | 8.39 | 0.47 |
| 17284605 | Igh-VJ558 | immunoglobulin heavy chain (J558 family) | 133.30 | 333.43 | 92.58 | 126.99 | 0.47 |
| 17438886 | Alb | albumin | 347.25 | 59.05 | 85.64 | 103.71 | 0.47 |
| 17467489 | | | 99.43 | 158.79 | 76.42 | 43.45 | 0.46 |
| 17425941 | Gm2083 | major urinary protein LOC100048885 | 32.47 | 8.35 | 9.20 | 9.70 | 0.46 |
| 17407412 | Sprr1a | small proline-rich protein 1A | 155.30 | 203.32 | 65.91 | 99.60 | 0.46 |
| 17425990 | Gm2083 | major urinary protein LOC100048885 | 28.48 | 7.57 | 8.41 | 8.21 | 0.46 |
| 17459291 | | | 22.40 | 78.72 | 22.44 | 23.94 | 0.46 |
| 17284593 | | | 36.26 | 30.15 | 14.71 | 15.56 | 0.46 |
| 17462529 | Mug1 | murinoglobulin 1 | 27.60 | 7.34 | 8.39 | 7.38 | 0.45 |
| 17374848 | Nusap1 | nucleolar and spindle associated protein 1 | 69.90 | 98.52 | 41.68 | 34.23 | 0.45 |
| 17398509 | | | 47.56 | 13.45 | 15.22 | 12.25 | 0.45 |
| 17543785 | Xist | inactive X specific transcripts | 19.83 | 115.27 | 41.91 | 18.23 | 0.45 |
| 17338231 | | | 20.16 | 55.61 | 18.62 | 14.85 | 0.44 |
| 17355951 | | | 39.95 | 57.02 | 20.42 | 21.79 | 0.44 |
| 17459338 | Igk | immunoglobulin kappa chain complex | 95.38 | 429.67 | 154.28 | 70.78 | 0.43 |
| 17284334 | Ighg | Immunoglobulin heavy chain (gamma polypeptide) | 9.73 | 37.33 | 10.22 | 9.80 | 0.43 |
| 17297591 | | | 25.87 | 34.98 | 10.96 | 14.66 | 0.42 |
| 17484587 | Cyp2e1 | cytochrome P450, family 2, subfamily e, polypeptide 1 | 72.44 | 20.20 | 20.79 | 18.14 | 0.42 |
| 17284546 | | | 26.97 | 5.65 | 6.62 | 7.08 | 0.42 |
| 17284402 | Ighm | immunoglobulin heavy constant mu | 17.74 | 458.59 | 100.69 | 98.98 | 0.42 |
| 17284617 | | | 29.34 | 79.68 | 16.26 | 28.77 | 0.41 |
| 17284657 | | | 8.04 | 30.04 | 9.33 | 6.25 | 0.41 |
| 17533213 | 1700012L04Rik | RIKEN cDNA 1700012L04 gene | 51.01 | 36.58 | 18.06 | 17.59 | 0.41 |
| 17281893 | | | 17.08 | 66.33 | 19.67 | 13.27 | 0.39 |
| 17284548 | | | 43.45 | 140.52 | 25.25 | 46.52 | 0.39 |
| 17409513 | Amy2a1 | amylase 2a1 | 10.74 | 44.44 | 9.98 | 11.14 | 0.38 |
| 17284628 | | | 13.48 | 37.56 | 9.19 | 9.99 | 0.38 |
| 17472581 | Gm766 | predicted gene 766 | 36.42 | 51.93 | 11.51 | 20.82 | 0.37 |
| 17284339 | Ighm | immunoglobulin heavy constant mu | 41.80 | 116.16 | 21.75 | 35.94 | 0.37 |
| 17284574 | Igh-VJ558 | immunoglobulin heavy chain (J558 family) | 100.76 | 76.88 | 23.14 | 40.10 | 0.36 |
| 17487374 | Apoc1 | apolipoprotein C-I | 76.59 | 16.58 | 15.95 | 17.15 | 0.36 |
| 17459309 | | | 8.24 | 38.65 | 9.58 | 6.81 | 0.35 |
| 17284530 | | | 25.25 | 73.26 | 16.00 | 17.39 | 0.34 |
| 17426022 | Mup8 | major urinary protein 8 | 46.26 | 9.14 | 9.12 | 9.59 | 0.34 |
| 17284660 | | | 17.16 | 45.57 | 12.27 | 8.51 | 0.33 |
| 17406252 | Fgb | fibrinogen beta chain | 57.67 | 10.80 | 10.06 | 11.42 | 0.31 |
| 17324322 | Ahsg | alpha-2-HS-glycoprotein | 83.54 | 16.10 | 16.85 | 12.87 | 0.30 |
| 17284662 | | | 48.22 | 251.38 | 62.07 | 25.33 | 0.29 |
| 17467384 | | | 116.46 | 417.80 | 89.27 | 61.29 | 0.28 |
| 17284432 | | | 48.93 | 187.60 | 36.89 | 26.03 | 0.27 |
| 17467537 | | | 22.87 | 83.94 | 15.11 | 12.49 | 0.26 |
| 17505769 | Ctrb1 | chymotrypsinogen B1 | 11.94 | 102.65 | 13.71 | 15.89 | 0.26 |
| 17401890 | Amy2a5 | amylase 2a5 | 7.90 | 61.80 | 8.61 | 8.44 | 0.24 |
| 17401893 | Amy2a5 | amylase 2a5 | 7.90 | 61.80 | 8.61 | 8.44 | 0.24 |
| 17401896 | Amy2a5 | amylase 2a5 | 7.90 | 61.80 | 8.61 | 8.44 | 0.24 |
| 17401899 | Amy2a5 | amylase 2a5 | 7.90 | 61.80 | 8.61 | 8.44 | 0.24 |
| 17284498 | | | 40.04 | 163.34 | 12.01 | 26.05 | 0.19 |
| 17284512 | | | 60.13 | 41.02 | 7.50 | 7.14 | 0.14 |
| 17283634 | Serpina1c | serine (or cysteine) peptidase inhibitor, clade A, member 1C | 116.21 | 9.89 | 7.89 | 6.94 | 0.12 |
| 17215166 | Akp3 | alkaline phosphatase 3, intestine, not Mn requiring | 32.55 | 367.74 | 23.00 | 20.10 | 0.11 |

# Supplementary Table 3

**Supplementary Table 3: Functional grupo enrichment analysis using Gene Ontology categoreis. Only significantly enriched categories are shown (Benjamini-Hochberg-corrected p<0.05)**

| Category[1] | Term[2] | Count[3] | Percentage[4] | PValue[5] | List Total[6] | Pop Hits[7] | Pop Total[8] | Fold Enrichment | Benjamini[9] |
|---|---|---|---|---|---|---|---|---|---|
| GOTERM_CC_ALL | GO:0005615~extracellular space | 38 | 5.8 | 1.17E-08 | 417 | 487 | 15531 | 2.91 | 3.29E-06 |
| GOTERM_CC_ALL | GO:0044421~extracellular region part | 45 | 6.9 | 8.47E-07 | 417 | 749 | 15531 | 2.24 | 1.19E-04 |
| GOTERM_CC_ALL | GO:0005576~extracellular region | 72 | 11.0 | 3.51E-05 | 417 | 1649 | 15531 | 1.63 | 3.28E-03 |
| GOTERM_MF_ALL | GO:0060089~molecular transducer activity | 101 | 15.4 | 9.72E-05 | 381 | 2777 | 14977 | 1.43 | 2.52E-02 |
| GOTERM_MF_ALL | GO:0004871~signal transducer activity | 101 | 15.4 | 9.72E-05 | 381 | 2777 | 14977 | 1.43 | 2.52E-02 |
| GOTERM_MF_ALL | GO:0004872~receptor activity | 95 | 14.5 | 5.51E-05 | 381 | 2533 | 14977 | 1.47 | 2.85E-02 |
| GOTERM_MF_ALL | GO:0003823~antigen binding | 7 | 1.1 | 2.62E-04 | 381 | 36 | 14977 | 7.64 | 3.39E-02 |
| GOTERM_MF_ALL | GO:0003735~structural constituent of ribosome | 13 | 2.0 | 3.93E-04 | 381 | 148 | 14977 | 3.45 | 4.06E-02 |
| GOTERM_MF_ALL | GO:0004930~G-protein coupled receptor activity | 66 | 10.1 | 2.49E-04 | 381 | 1663 | 14977 | 1.56 | 4.28E-02 |
| GOTERM_BP_ALL | GO:0009605~response to external stimulus | 34 | 5.2 | 1.00E-04 | 363 | 623 | 13799 | 2.07 | 4.77E-02 |

[1] Category: Gene Ontology categories: biological process (BP), cellular compartment (CC) and molecular function (MF).

[2] Term: Gene set name

[3] Count: number of genes associated with this gene set

[4] Percentag: gene associated with this gene set/total number of query genes

[5] P-value: modified Fisher Exact P-value

[6] List Total: number of genes in the query list mapped to any gene set in this ontology

[7] Pop Hits: number of genes annotated to this gene set on the background list

[8] Pop Total: number of genes on the background list mapped to any gene set in this ontology.

[9] Benjamini; Benjamini-Hochberg-corrected p-value