

### Supplementary Table 1

#### Changes in gene expression in pons/medulla after chronic levetiracetam treatment.

Rats received levetiracetam, 150 mg/kg, or control solution perorally twice per day for 90 days. Changes in gene expression were noted for 65 genes in pons/medulla, of which 41 were identified or similar to known genes or predicted (P) gene sequences.

| Source<br>accession   | symbol    | log2<br>ratio | gene name   |
|---|-----------|---------------|---|
| <b>Ion channels, transporters and extracellular signaling</b> |           |               |   |
| AI408417  | Pdcl      | 1.15          | phosducin-like  |
| BC088395  | Dao1      | 1.02          | D-amino acid<br>oxidase   |
| BC091136  | Cxcr3     | 0.81          | chemokine (C-X-C<br>motif) receptor 3   |
| AF080453  | Slc23a2   | 0.77          | solute carrier<br>family 23<br>(nucleobase<br>transporters),<br>member 2                                      |
| AF070475  | Slc4a7    | 0.74          | solute carrier<br>family 4,<br>Na <sup>+</sup> /HCO <sub>3</sub> <sup>-</sup> -<br>cotransporter,<br>member 7 |
| AW529457  | Kcna4     | 0.61          | K voltage-gated<br>channel, shaker-<br>related subfamily,<br>member 4   |
| BF415436  | Pcdh9 (P) | 0.60          | Protocadherin 9   |
| BC083173  | Acvrl1    | -0.59         | activin A receptor<br>type II-like 1  |
| NM_017346   | Cacnb1    | -0.61         | Ca channel,   |

|  |            |       |  |
|--|------------|-------|--|
| AF247451                                 | Hcn2       | -0.78 | voltage-dependent,<br>beta 1 subunit<br>hyperpolarization<br>activated cyclic<br>nucleotide-gated K<br>channel 2 |
| <b>Intracellular signal transduction</b> |            |       |  |
| AI177433                                 | Ppp1cb     | 0.74  | Protein<br>phosphatase 1,<br>catalytic subunit,<br>beta isoform  |
| CB579357                                 | Spred1 (P) | 0.68  | Sprouty protein<br>with EVH-1<br>domain 1, related<br>sequence   |
| AY724501                                 | Kctd3 (P)  | 0.65  | K channel<br>tetramerisation<br>domain containing<br>3   |
| AF305618                                 | Khdrbs2    | 0.63  | KH domain<br>containing, RNA<br>binding, signal<br>transduction<br>associated 2                                  |
| BC091203                                 | Prkx       | 0.62  | Protein kinase, X-<br>linked   |
| CR473766                                 | LOC502685  | -0.60 | similar to<br>interferon<br>regulatory factor 10   |
| CB579601                                 | Phldb1     | -0.63 | pleckstrin<br>homology-like  |

|                                  |            |       |  |
|----------------------------------|------------|-------|--|
| CB327478                         | Arhgef1    | -0.68 | domain, family B, member 1<br>Rho guanine nucleotide exchange factor (GEF) 1 |
| <b>Transcription/translation</b> |            |       |  |
| CB717774                         |            | 1.27  | Similar to zinc finger protein 426 (Zfp426)                                  |
| CO563017                         | Lsm1 (P)   | 0.70  | LSM1 homolog, U6 small nuclear RNA associated                                |
| AW253109                         | Gle1l (P)  | 0.68  | GLE1 RNA export mediator-like (yeast)  |
| AI236628                         | RGD1565867 | 0.63  | Similar to 60S ribosomal protein L7a   |
| AF372090                         | Psip1      | 0.61  | PC4 and SFRS1 interacting protein 1  |
| AI411264                         | Vars2l     | -0.61 | valyl-tRNA synthetase 2-like   |
| BQ199692                         | Hdac10     | -0.65 | histone deacetylase 10   |
| BC087668                         | Dbp        | -0.66 | D site albumin promoter binding protein                                      |
| CB547923                         | Dnmt2 (P)  | -0.89 | DNA methyltransferase 2  |

**Replication/DNA repair**

|          |            |       |  |
|----------|------------|-------|--|
| BI288826 | Ccnh       | 0.84  | cyclin H   |
| BU760481 | Ccn1       | 0.75  | cyclin A1  |
| AW534902 | Smc211 (P) | 0.63  | SMC2 structural maintenance of chromosomes 2-like 1 (yeast)            |
| BI288925 | Nap112     | 0.61  | nucleosome assembly protein 1-like 2                                   |
| AI007875 | Xrcc1      | -0.70 | X-ray repair complementing defective repair in Chinese hamster cells 1 |

**Cytoskeleton/cell adhesion**

|          |           |      |                  |
|----------|-----------|------|------------------|
| BE101868 | Itgb8 (P) | 0.75 | Integrin beta 8  |
| CK838524 | Des       | 0.64 | desmin           |
| BC092587 | Itga7     | 0.62 | integrin alpha 7 |

**Metabolism**

|           |           |      |  |
|-----------|-----------|------|--|
| BF402481  | LOC361014 | 0.70 | similar to peptide N-glycanase                         |
| AI548891  | Papd4     | 0.63 | PAP associated domain containing 4                     |
| AA945172  | Lap3      | 0.63 | leucine aminopeptidase 3                               |
| XM_576452 | LOC501040 | 0.60 | similar to nicotinamide nucleotide adenylyltransferase |

|          |          |       |   |
|----------|----------|-------|---|
| AI112140 | Serinc1  | 0.60  | 3<br>serine incorporator                              |
| BM386322 | Hsd17b12 | -0.60 | 1<br>hydroxysteroid (17-<br>beta)<br>dehydrogenase 12 |

### Supplementary Table 2

#### Differentially expressed transcripts in hippocampus after chronic phenytoin

| Source Accession   | Symbol | log2ratio | Rat UniGene Title  |
|--|--------|-----------|--|
| <b>Ion channels,<br/>transporters,<br/>extracellular<br/>signaling</b> |        |           |  |
| AY724501   | Kctd3  | 0.72      | Potassium channel<br>tetramerisation<br>domain containing 3<br>(P)       |
| CB327348   | Grin1  | 0.69      | Glutamate receptor,<br>ionotropic, N-<br>methyl D-aspartate<br>1         |
| M59980   | Kcnd2  | 0.63      | Potassium voltage<br>gated channel, Shal-<br>related family,<br>member 2 |
| XM_238093  | Ltbp4  | 0.63      | Latent transforming<br>growth factor beta<br>binding protein 4<br>(P)    |
| CV797322   | Cx3cl1 | 0.6       | Chemokine (C-X3-<br>C motif) ligand 1                                    |

|          |        |       |                                      |
|----------|--------|-------|--------------------------------------|
| J05167   | Slc4a3 | 0.59  | Solute carrier family<br>4, member 3 |
| AI170314 | Cfh    | -0.65 | Complement<br>component factor H     |
| CA508381 | C2     | -0.7  | Complement<br>component 2            |
| X03036   | Crh    | -0.88 | Corticotropin<br>releasing hormone   |
| BQ189922 | Adrb3  | -1.06 | Adrenergic receptor,<br>beta 3       |

### **Intracellular signal transduction**

|          |         |      |   |
|----------|---------|------|---|
| AF451975 | Caskin1 | 0.74 | Cask-interacting<br>protein 1                           |
| AF112257 | Ryr2    | 0.64 | Ryanodine receptor<br>2, cardiac                        |
| CR460619 | Sipa111 | 0.62 | Signal-induced<br>proliferation-<br>associated 1 like 1 |

### **Transcription/translation**

|          |            |      |   |
|----------|------------|------|---|
| CB324150 | RGD:708405 | 0.86 | CTD-binding SR-<br>like rA1   |
| BI281745 | Pbx1       | 0.86 | Pre-B-cell leukemia<br>transcription factor<br>1 (P)                  |
| AA851841 | Sart3      | 0.74 | Squamous cell<br>carcinoma antigen<br>recognized by T-<br>cells 3 (P) |
| BI285893 | Helz       | 0.62 | Helicase with zinc<br>finger domain (P)                               |
| BQ781853 | Rai1       | 0.61 | Retinoic acid   |

|                                   |           |       |  |
|-----------------------------------|-----------|-------|--|
| BC087665                          | Rsrc1     | -0.65 | induced 1 (P)<br>arginine/serine-rich<br>coiled-coil 1           |
| <b>Replication/DNA repair</b>     |           |       |  |
| BI288925                          | LOC317247 | -0.73 | Nap112   |
| <b>Cytoskeleton/cell adhesion</b> |           |       |  |
| BF386446                          | Slit3     | 1.11  | Slit Homolog 3   |
| BF409144                          | Igsf4a    | 0.65  | Immunoglobulin<br>superfamily,<br>member 4A (P)                  |
| NM_022401                         | Plec1     | 0.64  | Plectin 1  |
| CK840124                          | Lama2     | 0.61  | Laminin, alpha 2 (P)   |
| CB701422                          | Mapre3    | 0.61  | Microtubule-<br>associated protein,<br>RP/EB family,<br>member 3 |
| AI677633                          | Epb4.9    | -0.69 | Erythrocyte protein<br>band 4.9 (P)                              |
| BF410497                          | Ank3      | -0.79 | Ankyrin 3,<br>epithelial isoform g                               |
| <b>Metabolism</b>                 |           |       |  |
| AW521418                          | Atpaf1    | -0.61 | ATP synthase<br>mitochondrial F1<br>complex assembly             |
| BC091358                          | LOC500954 | -0.64 | Ubiquitin-Like 5<br>Protein                                      |
| AA945172                          | Lap3      | -0.71 | Leucine<br>aminopeptidase 3<br>(P)                               |
| CO563017                          | Lsm1      | -0.73 | LSM1 homolog, U6<br>small nuclear RNA                            |

associated (P)

### Supplementary Table 3

#### Differentially-expressed transcripts in frontal cortex after chronic phenytoin

| Source accession  | Gene Symbol | log2 ratio | rat unigene title  |
|---|-------------|------------|--|
| <b>Ion channels, transporters and extracellular signaling</b> |             |            |  |
| CX570045  | Sypl        | 1.61       | synaptophysin-like protein;<br>pantophysin                             |
| AF332142  | Pcyox1      | 1.50       | Chloride ion pump-<br>associated 55 kDa protein                        |
| AI228929  | Bai3        | 1.28       | Brain-specific angiogenesis<br>inhibitor 3 (P)                         |
| BF404398  | RGD:1562096 | 1.06       | Similar to opioid growth<br>factor receptor                            |
| XM_574923   | Bbs7        | 1.05       | Bardet-Biedl syndrome 7<br>(P)   |
| X03036  | Crh         | 1.01       | Corticotropin releasing<br>hormone                                     |
| AA817752  | Snx2        | 0.98       | Sorting nexin 2 (P)  |
| AI009372  | Fgf12       | 0.96       | Fibroblast growth factor 12  |
| AI232887  | Mtx2        | 0.92       | Metaxin 2 (P)  |
| BF404562  | Gabrg2      | 0.88       | Gamma-aminobutyric acid<br>A receptor, gamma 2                         |
| AI171975  | Sh3yl1      | 0.88       | SEC24 related gene family,<br>member A ( <i>S. cerevisiae</i> )<br>(P) |
| CB695754  | Nr2f1       | 0.81       | Nuclear receptor subfamily<br>2, group F, member 1                     |
| XM_214331   | Klhl2       | 0.76       | Kelch-like 2, Mayven<br>( <i>Drosophila</i> ) (P)                      |
| CB556667  | Klhl7       | 0.76       | Kelch-like 7 ( <i>Drosophila</i> )                                     |



|  |            |       |   |
|--|------------|-------|---|
|  |            |       | (P)   |
| AA819421                                 | Nup153     | 0.76  | Nucleoporin 153kD   |
| AW526521                                 | Gpm6a      | 0.71  | Glycoprotein m6a  |
| CB733855                                 | Golga3     | 0.69  | Golgi autoantigen, golgin subfamily a, 3 (P)                        |
| CB323230                                 | RGD:735095 | 0.65  | Similar to Protein KIAA1688 homolog                                 |
| BF552272                                 | Ppil4      | 0.59  | Peptidylprolyl isomerase (cyclophilin)-like 4 (P)                   |
| BF283385                                 | Aaas       | -0.66 | Achalasia, adrenocortical insufficiency, alacrimia (P)              |
| AI409651                                 | Clcn6      | -1.01 | Similar to putative chloride channel protein CLC6                   |
| <b>Intracellular signal transduction</b> |            |       |   |
| AI408417                                 | Pdcl       | 1.51  | phosducin-like  |
| AF305618                                 | Khdrbs2    | 1.50  | KH domain containing, RNA binding, signal transduction associated 2 |
| U78517                                   | Rapgef4    | 1.43  | CAMP-regulated guanine nucleotide exchange factor II                |
| CB692530                                 | Ranbp6     | 1.25  | RAN binding protein 6 (P)   |
| BG667328                                 |            | 1.07  | Similar to protein phosphatase 2C domain containing protein         |
| BC086357                                 | RGD1308119 | 0.99  | Similar to F-box protein FBL2 (P)                                   |
| AI045974                                 | Sh3yl1     | 0.99  | Sh3 domain YSC-like 1 (P)   |
| BI293175                                 | Riok2      | 0.93  | RIO kinase 2 (yeast) (P)  |
| AI144754                                 | Ddx23      | 0.89  | Rho family GTPase 1 (P)   |
| AW920244                                 | Hook3      | 0.86  | Hook homolog 3  |

|           |            |      |  |
|-----------|------------|------|--|
| AA964459  | Dyrk2      | 0.85 | Dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2 (P) |
| AY769991  | LOC493574  | 0.83 | Notch1-induced protein   |
| CB729338  | Pard6g     | 0.81 | Par-6 partitioning defective 6 homolog gamma (C. elegans) (P)        |
| AI169016  | Plcl1      | 0.80 | Phospholipase C-like 1   |
| XM_235823 | RGD1309884 | 0.79 | Similar to translokin (P)  |
| AA945483  | Lrba       | 0.74 | LPS-responsive beige-like anchor (P)                                 |
| XM_342634 | LOC362317  | 0.74 | Similar to krev interaction trapped-1A                               |
| CF113908  | Hrmt113    | 0.73 | arginine N-methyltransferase 3 (PRMT3)                               |
| BF281863  |            | 0.70 | strongly similar to serum/glucocorticoid regulated kinase 3          |
| AW144433  | Akap10     | 0.70 | A kinase (PRKA) anchor protein 10 (P)                                |
| BF561395  | Nkd2       | 0.68 | Naked cuticle 2 homolog (Drosophila) (P)                             |
| CB544812  | Map3k4     | 0.68 | Mitogen activated protein kinase kinase kinase 4 (P)                 |
| CB579357  | Spred1     | 0.67 | Sprouty protein with EVH-1 domain 1, related sequence (P)            |
| CB693316  | Cpne1      | 0.66 | Copine I (P)   |
| AY004875  | Arfip1     | 0.64 | ADP-ribosylation factor interacting protein 1                        |

|                                  |             |       |   |
|----------------------------------|-------------|-------|---|
| AI177433                         | Ppp1cb      | 0.64  | Protein phosphatase 1, catalytic subunit, beta isoform              |
| XM_575385                        | RGD:1563764 | 0.61  | Similar to PHD finger protein 14 isoform 1                          |
| XM_578400                        | RGD:1565949 | 0.61  | Similar to neuronal interacting factor X 1 (NIX1)                   |
| AF275266                         | Pdrp        | -0.64 | PDRP protein  |
| XM_342612                        | Centg3      | -0.81 | Centaurin, gamma 3 (P)  |
| XM_343552                        | Ptpn18      | -0.89 | Protein tyrosine phosphatase, non-receptor type 18 (P)              |
| AF451975                         | Caskin1     | -0.99 | Cask-interacting protein 1  |
| <b>Transcription/translation</b> |             |       |   |
| CB742460                         | Zfml        | 1.50  | Zinc finger, matrin-like (P)  |
| CK218800                         | Fmr1        | 1.45  | Fragile X mental retardation syndrome 1 homolog                     |
| XM_575140                        | Rbms1       | 1.44  | RNA binding motif, single stranded interacting protein 1 (P)        |
| AI178112                         | Ndnl2       | 1.32  | Necdin-like 2 (P)   |
| AI172236                         | Crsp9       | 1.23  | Cofactor required for Sp1 transcriptional activation, subunit 9 (P) |
| XM_224894                        | Cnot7       | 1.16  | CCR4-NOT transcription complex, subunit 7 (P)                       |
| AA800994                         | Ptbp2       | 1.12  | Polypyrimidine tract binding protein 2                              |
| XM_227104                        | Zfp131      | 1.08  | Zinc finger protein 131 (P)   |
| AI100897                         | Vars2       | 1.03  | Valyl-tRNA synthetase 2   |

|           |             |      |   |
|-----------|-------------|------|---|
| BC087155  | RGD1310161  | 1.02 | Similar to DNA segment, Chr 8, ERATO Doi 233, expressed (P) |
| XM_214003 | Mrps18c     | 0.96 | Mitochondrial ribosomal protein S18C (P)                    |
| XM_224510 | RGD1308297  | 0.96 | Similar to CG10084-PA (P)                                   |
| BC070932  | Taf9l       | 0.94 | TAF9-like RNA polymerase II                                 |
| AF372090  | Psip1       | 0.94 | PC4 and SFRS1 interacting protein 1                         |
| BF415922  | Dhx9        | 0.92 | DEAH (Asp-Glu-Ala-His) box polypeptide 9 (P)                |
| BF545357  | Zipro1      | 0.91 | Zinc finger proliferation 1 (P)                             |
| AI235601  | RGD:1563860 | 0.88 | Similar to ribosomal protein S6 kinase 2                    |
| XM_341180 | Mtf2        | 0.87 | Metal-response element-binding transcription factor 2       |
| AJ278466  | Cdx2        | 0.85 | Caudal type homeo box 2                                     |
| AI236628  |             | 0.84 | Similar to 60S ribosomal protein L7a                        |
| BI293915  | Qki         | 0.83 | Similar to QUAKING isoform 6                                |
| AA944589  | Cpsf6       | 0.82 | Cleavage and polyadenylation specific factor 6, 68kDa (P)   |
| BC093607  | LOC317163   | 0.82 | Eukaryotic translation initiation factor 1A (P)             |
| CF978846  | Ap1s2       | 0.81 | adaptor related protein complex 1, sigma 2 subunit          |

|           |           |      |  |
|-----------|-----------|------|--|
| XM_342684 | Hnrpa2b1  | 0.79 | (P)<br>Heterogeneous nuclear<br>ribonucleoprotein A2/B1                  |
| XM_347237 | LOC368070 | 0.77 | (P)<br>Similar to pinin  |
| NM_017086 | Egr3      | 0.75 | Early growth response 3  |
| BF281146  | Nr3c1     | 0.73 | Nuclear receptor subfamily<br>3, group C, member 1                       |
| AA942929  | Npas2     | 0.73 | Neuronal PAS domain<br>protein 2 (P)                                     |
| BE108412  | Terf1     | 0.72 | Similar to telomeric repeat<br>binding factor 1 [Rattus<br>norvegicus] P |
| AI179013  | Rbm3      | 0.71 | RNA binding motif (RNP1,<br>RRM) protein 3                               |
| BQ781897  | Gnl2      | 0.71 | Guanine nucleotide binding<br>protein-like 2                             |
| BF283760  | Ldb2      | 0.71 | LIM domain binding 2 (P)   |
| XM_233812 | LOC313837 | 0.70 | Similar GlutaminyI-tRNA<br>cyclotransferase                              |
| BF416550  |           | 0.68 | Similar to WW-domain<br>oxidoreductase                                   |
| XM_226380 | Smarca5   | 0.67 | SWI/SNF related (P)  |
| AI232908  | Rg9mtd3   | 0.65 | RNA (guanine-9-)<br>methyltransferase domain<br>containing 3 (P)         |
| AI230884  | Clp1      | 0.65 | Cardiac lineage protein 1  |
| BF547277  | Mycbp     | 0.63 | C-myc binding protein (P)  |
| XM_223786 | Zfp503    | 0.63 | Zinc finger protein 503 (P)  |
| BF418812  | Tceal1    | 0.63 | Transcription elongation<br>factor A (SII)-like 1                        |

|                                   |           |       |   |
|-----------------------------------|-----------|-------|---|
| BG670370                          | Isgf3g    | 0.62  | Interferon dependent positive acting transcription factor 3 gamma (P) |
| BI294916                          | Klf2      | 0.60  | Rattus norvegicus Kruppel-like factor (Klf2), mRNA (P)                |
| CK841084                          | Whsc2     | -0.61 | Wolf-Hirschhorn syndrome candidate 2 (P)                              |
| <b>Replication</b>                |           |       |   |
| BI288925                          | LOC317247 | 1.41  | Similar to Nap112   |
| CF109508                          | Trp53bp2  | 1.03  | Transformation related protein 53 binding protein 2 (P)               |
| CK223547                          | Smc511    | 1.00  | structural maintenance of chromosomes 5-like 1 (P)                    |
| AW534902                          | Smc211    | 0.98  | SMC2 structural maintenance of chromosomes 2-like 1 (yeast) (P)       |
| BI298690                          | Ccnc      | 0.85  | Cyclin C  |
| CB793611                          | Cent2     | 0.79  | Cyclin T2 (P)   |
| AI501936                          | LOC317575 | 0.74  | Similar to Smarca1 protein  |
| <b>Cytoskeleton/cell adhesion</b> |           |       |   |
| BE107259                          | Fndc3a    | 2.44  | Fibronectin type III domain containing 3 (P)                          |
| BF415436                          | Pcdh9     | 1.82  | Protocadherin 9 (P)   |
| BE101868                          | Itgb8     | 1.19  | Integrin beta 8 (predicted)   |
| AI599327                          | Itgb3bp   | 1.08  | Integrin beta 3 binding protein (beta3-endonexin) (P)                 |
| BF391491                          | Col10a1   | 1.06  | 5'-nucleotidase, cytosolic  |

|                   |            |      |  |
|-------------------|------------|------|--|
| CB765491          |            | 0.97 | II-like 1 (P)<br>Phosphatidylinositol glycan,<br>class B (P)                   |
| BE120827          | Ipp        | 0.93 | IAP promoted placental<br>gene (P)   |
| CX569401          | RGD1564871 | 0.91 | Similar to Thioredoxin<br>domain containing protein 6                          |
| BE118227          | Cbll1      | 0.90 | Casitas B-lineage<br>lymphoma-like 1 (P)                                       |
| <b>Metabolism</b> |            |      |  |
| AA945172          | Lap3       | 3.96 | Leucine aminopeptidase 3<br>(P)  |
| NM_021769         | Sult1d1    | 2.12 | Sulfotransferase family 1D,<br>member 1  |
| CB326787          | Ptgs2      | 1.86 | Prostaglandin-endoperoxide<br>synthase 2                                       |
| BQ782625          | RGD:708530 | 1.58 | Cytochrome P450, family 4,<br>subfamily v, polypeptide 3<br>(P)                |
| CB614058          | Psmc6      | 1.33 | Proteasome (prosome,<br>macropain) 26S subunit,<br>ATPase, 6 (P)               |
| AA943306          | Gnpda2     | 1.26 | Glucosamine-6-phosphate<br>deaminase 2 (P)                                     |
| CF113680          | Mthfd11    | 1.22 | Methylenetetrahydrofolate<br>dehydrogenase (NADP+<br>dependent) 1-<br>like (P) |
| BC081751          | Yme111     | 1.16 | YME1-like 1 ( <i>S. cerevisiae</i> )   |
| U13176            | Ube2d2     | 1.11 | Ubiquitin-conjugating<br>enzyme E2D 2  |

|           |             |      |  |
|-----------|-------------|------|--|
| BF547130  | Fbxl3a      | 0.95 | F-box and leucine-rich repeat protein 3a (P)                             |
| AI171206  | Zfp364      | 0.94 | Zinc finger protein 364 (P)  |
| BI284033  | Car6        | 0.93 | Carbonic anhydrase 6 (P)   |
| AI069981  | Senp7       | 0.91 | SUMO1/sentrin specific protease 7 (P)                                    |
| AA925355  | Rkhd1       | 0.88 | Ring finger (C3HC4 type) and KH domain containing 1 (P)                  |
| AI177273  | LOC361181   | 0.88 | Similar to cullin 4A   |
| AI010637  | LOC361014   | 0.87 | Similar to peptide N-glycanase   |
| CN542202  | Mgat2       | 0.87 | Alpha-1,6-mannosyl-glycoprotein 2-beta-N-acetylglucosaminyltransferase   |
| AI170993  | Adamts9     | 0.85 | disintegrin-like metalloprotease with thrombospondin type 1 motif, 9 (P) |
| BI273816  | Cyp20a1     | 0.84 | Cytochrome P450, family 20, subfamily A, polypeptide 1                   |
| XM_233345 | Zcchc11     | 0.84 | Zinc finger, CCHC domain containing 11 (P)                               |
| BC083823  | Fbxo30      | 0.83 | F-box only protein 30  |
| BF283070  | Cyp7b1      | 0.79 | Cytochrome P450, family 7, subfamily b, polypeptide 1                    |
| BC079007  | RGD:1303146 | 0.77 | Similar to calcyclin binding protein                                     |
| AB067814  | RGD:620449  | 0.77 | Seven in absentia 1A   |
| AW918051  | LOC316122   | 0.76 | CGI-58-like protein  |



|           |           |       |   |
|-----------|-----------|-------|---|
| AA997435  | LOC500629 | 0.74  | Similar to alcohol dehydrogenase PAN2                           |
| BG666167  | Adam32    | 0.73  | A disintegrin and metalloproteinase domain 9 (P)                |
| CB580139  | LOC501157 | 0.67  | Similar to Ribulose-5-phosphate-3-epimerase                     |
| XM_574749 | Herc4     | 0.65  | Hect domain and RLD 4 (P)                                       |
| AI235574  |           | 0.65  | Similar to ubiquitin-protein ligase E3-alpha                    |
| AA996520  | MGC109340 | 0.65  | Similar to Microsomal signal peptidase 23 kDa subunit           |
| CR477228  | Psm12     | 0.63  | Proteasome 26S non-ATPase subunit 12                            |
| AI233261  | Gclm      | 0.63  | Glutamate cysteine ligase, modifier subunit                     |
| CB794901  | Cmpk      | 0.63  | Cytidylate kinase   |
| CK842957  | Parg      | 0.61  | Poly (ADP-ribose) glycohydrolase                                |
| AA851922  | Lypla1    | 0.60  | Lysophospholipase 1   |
| XM_341334 | Ebpl      | 0.60  | Emopamil binding protein-like (P)                               |
| AA893261  | Inpp5f    | 0.59  | Inositol polyphosphate-5-phosphatase F (P)                      |
| CB324902  | B4galt7   | -0.62 | Xylosylprotein beta1,4-galactosyltransferase, polypeptide 7 (P) |
| BC091209  | Rnaseh1   | -0.86 | Ribonuclease H1 (P)   |