Supplementary Table 1: Complete list of the 233 genes with significant expression differences between brain death animals and control animals.

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene Name** | **Gene Symbol** | **Fold Change** | **Regulation** |
| ARP3 actin-related protein 3 homolog (yeast) | ACTR3 | 1.5 | UP |
| Annexin A1 | ANXA1 | 1.6 | UP |
| Actin related protein 2/3 complex, subunit 1B, 41kDa | ARPC1B | 1.8 | UP |
| Activating transcription factor 4 (tax-responsive enhancer element B67) | ATF4 | 1.6 | UP |
| Antizyme inhibitor 1 | AZIN1 | 1.6 | UP |
| BCL2-associated X protein | BAX | 1.5 | UP |
| Bone morphogenetic protein 4 | BMP4 | 1.8 | UP |
| Complement component 1, q subcomponent, B chain | C1QB | 1.6 | UP |
| Complement component 3 | C3 | 1.7 | UP |
| Coxsackie-adenovirus-receptor homolog | CAR | 1.7 | UP |
| Caspase 3, apoptosis-related cysteine peptidase | CASP3 | 1.5 | UP |
| Caspase 8, apoptosis-related cysteine peptidase | CASP8 | 1.8 | UP |
| Chemokine (C-C motif) ligand 2 | CCL2 | 14.3 | UP |
| Chemokine (C-C motif) ligand 4 | CCL4 | 2.4 | UP |
| Chemokine (C-C motif) ligand 5 | CCL5 | 2.7 | UP |
| Chemokine (C-C motif) receptor 5 | CCR5 | 1.8 | UP |
| CD47 molecule | CD47 | 1.5 | UP |
| CD97 molecule | CD97 | 2.3 | UP |
| Cell division cycle 42 (GTP binding protein, 25kDa) | CDC42 | 1.6 | UP |
| Chloride intracellular channel 1 | CLIC1 | 1.7 | UP |
| ER lipid raft associated 1 | ERLIN1 | 1.6 | UP |
| Fatty acid binding protein 5 | FABP5 | 1.7 | UP |
| Fc fragment of IgG, low affinity IIb, receptor (CD32) | FCGR2B | 2.6 | UP |
| Fc fragment of IgG, low affinity IIIb, receptor (CD16b) | FCGR3B | 2.0 | UP |
| v-fos FBJ murine osteosarcoma viral oncogene homolog | FOS | 3.3 | UP |
| FYN oncogene related to SRC, FGR, YES | FYN | 1.9 | UP |
| Guanylate binding protein 1, interferon-inducible, 67kDa | GBP1 | 3.3 | UP |
| Granzyme H (cathepsin G-like 2, protein h-CCPX) | GZMH | 2.1 | UP |
| High mobility group AT-hook 1 | HMGA1 | 2.8 | UP |
| Intercellular adhesion molecule-1 | ICAM-1 | 2.0 | UP |
| Interferon induced transmembrane protein 1 (9-27) | IFITM1 | 1.7 | UP |
| Interferon (alpha, beta and omega) receptor 1 | IFNAR1 | 1.8 | UP |
| Insulin-like growth factor binding protein 3 | IGFBP3 | 1.9 | UP |
| Interleukin 10 receptor, beta | IL10RB | 2.7 | UP |
| Interferon regulatory factor 1 | IRF1 | 2.1 | UP |
| Interferon regulatory factor 7 | IRF7 | 2.1 | UP |
| Interferon regulatory factor 8 | IRF8 | 2.5 | UP |
| Integrin, beta 2 (complement component 3 receptor 3 and 4 subunit) | ITGB2 | 1.8 | UP |
| Integrin, beta 8 | ITGB8 | 2.7 | UP |
| Janus kinase 2 | JAK2 | 2.0 | UP |
| Lectin, galactoside-binding, soluble, 1 | LGALS1 | 2.1 | UP |
| EPLIN-b | LOC100137084 | 1.7 | UP |
| similar to claudin 5 (transmembrane protein deleted in velocardiofacial syndrome) | LOC100151859 | 4.1 | UP |
| similar to Bromodomain adjacent to zinc finger domain protein 1A (Cbp146) | LOC100151954 | 2.4 | UP |
| similar to solute carrier family 38, member 2 | LOC100151955 | 1.6 | UP |
| similar to ribosomal protein S6 kinase, 90kDa, polypeptide 5 | LOC100152046 | 1.5 | UP |
| similar to Rab9 effector p40 | LOC100152056 | 1.6 | UP |
| similar to delta-like 4 protein | LOC100152163 | 1.8 | UP |
| similar to syntaxin 11 | LOC100152253 | 2.2 | UP |
| similar to Acetyl-Coenzyme A acetyltransferase 2 | LOC100152303 | 1.5 | UP |
| similar to serine-arginine repressor protein (35kDa) (SRrp35) | LOC100152352 | 1.9 | UP |
| similar to CD53 antigen | LOC100152398 | 2.0 | UP |
| similar to Complement component C1q receptor precursor (Complement component 1 q subcomponent receptor 1) (C1qR) (C1qRp) (C1qR(p)) (C1q/MBL/SPA receptor) (Matrix-remodeling-associated protein 4) (CD93 antigen) (CDw93) | LOC100152403 /// LOC100155660 | 2.0 | UP |
| similar to RAS p21 protein activator 2 | LOC100152508 | 1.5 | UP |
| similar to Semaphorin-4D precursor (BB18) (A8) (GR3) (CD100 antigen) | LOC100152598 | 1.6 | UP |
| similar to lumican | LOC100152607 | 2.5 | UP |
| similar to ATPase, class I, type 8B, member 1 | LOC100153006 | 2.0 | UP |
| similar to ATPase, class I, type 8B, member 1 | LOC100153006 | 1.9 | UP |
| similar to zinc finger protein 318 | LOC100153069 | 2.1 | UP |
| similar to Cathepsin S | LOC100153090 | 2.2 | UP |
| similar to Solute carrier family 39 (zinc transporter), member 1 | LOC100153098 | 2.0 | UP |
| similar to membrane associated guanylate kinase, WW and PDZ domain containing 3 | LOC100153223 | 1.8 | UP |
| similar to membrane associated guanylate kinase, WW and PDZ domain containing 3 | LOC100153223 | 1.7 | UP |
| similar to CD83 molecule | LOC100153365 | 3.9 | UP |
| similar to mitogen-activated protein kinase kinase kinase 13 | LOC100153682 | 1.9 | UP |
| similar to ezrin | LOC100153898 /// LOC100155234 | 1.8 | UP |
| similar to Inositol polyphosphate 1-phosphatase (IPPase) (IPP) | LOC100154245 | 1.6 | UP |
| similar to SAM domain and HD domain-containing protein 1 (Dendritic cell-derived IFNG-induced protein) (DCIP) (Monocyte protein 5) (MOP-5) | LOC100154500 | 1.8 | UP |
| similar to guanosine monophosphate reductase | LOC100154573 | 1.8 | UP |
| similar to phosphatidylinositol glycan anchor biosynthesis, class U | LOC100154657 | 1.9 | UP |
| similar to calcium release-activated calcium channel protein 1 | LOC100154923 | 1.9 | UP |
| similar to ribosome receptor | LOC100154945 | 1.7 | UP |
| similar to CDC28 protein kinase 1B | LOC100155110 | 2.0 | UP |
| similar to phosphoinositide-3-kinase adaptor protein 1 | LOC100155165 | 2.6 | UP |
| similar to DENN/MADD domain containing 3 | LOC100155273 | 1.7 | UP |
| similar to D4-GDP-dissociation inhibitor | LOC100155466 | 1.7 | UP |
| similar to ataxin-1 ubiquitin-like interacting protein | LOC100155539 | 2.2 | UP |
| similar to U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 2 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 2) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 2) (Renal carcinoma an | LOC100155649 /// LOC100157636 | 1.6 | UP |
| similar to protein kinase, interferon-inducible double stranded RNA dependent activator | LOC100155653 | 2.4 | UP |
| similar to Uncharacterized protein C1orf54 homolog precursor (Protein L259) | LOC100155802 | 2.4 | UP |
| similar to centrosomal protein 290kDa | LOC100155832 | 1.6 | UP |
| similar to SRY (sex determining region Y)-box 4 | LOC100155898 | 3.0 | UP |
| similar to Phosphoglucomutase 3 | LOC100156015 | 1.6 | UP |
| similar to WW45 protein | LOC100156165 | 1.5 | UP |
| similar to Plastin-2 (L-plastin) (Lymphocyte cytosolic protein 1) (LCP-1) (LC64P) | LOC100156254 | 1.8 | UP |
| similar to Protein S100-A4 (S100 calcium-binding protein A4) (Metastasin) (Protein Mts1) (Placental calcium-binding protein) (Calvasculin) | LOC100156358 | 2.6 | UP |
| similar to KIAA1949 protein | LOC100156390 | 1.8 | UP |
| similar to Ras association domain-containing protein 2 | LOC100157105 | 1.6 | UP |
| similar to Long-chain-fatty-acid--CoA ligase 5 (Long-chain acyl-CoA synthetase 5) (LACS 5) | LOC100157521 | 2.1 | UP |
| similar to Eukaryotic translation initiation factor 2C, 2 | LOC100157671 | 1.7 | UP |
| similar to DIS3 mitotic control homolog (S. cerevisiae)-like | LOC100157710 | 1.5 | UP |
| similar to histone 2a | LOC100157768 | 1.8 | UP |
| similar to tumor necrosis factor receptor superfamily, member 21 | LOC100157802 | 1.7 | UP |
| similar to E2F transcription factor 5 | LOC100157957 | 1.8 | UP |
| similar to immediate early response 5-like | LOC100157960 | 3.1 | UP |
| Ribosomal protein S23 | LOC396638 | 1.7 | UP |
| Stathmin-1 | LOC494463 | 2.7 | UP |
| Tripartite motif protein TRIM5 | LOC733579 | 2.0 | UP |
| MyoD family inhibitor domain containing | MDFIC | 2.1 | UP |
| NK-lysin | NKL | 2.8 | UP |
| Nuclear receptor subfamily 2, group F, member 2 | NR2F2 | 1.7 | UP |
| Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor) | NR3C1 | 1.8 | UP |
| Peripherial benzodiazepine receptor associated protein | PAP7 | 1.6 | UP |
| Ubiquitous PKC-potentiated PP1 inhibitor | PHI-1 | 1.9 | UP |
| Inhibitor of apoptosis-like | PIAP | 2.8 | UP |
| Plasminogen activator | PLAU | 4.4 | UP |
| Nexin-1 | PN-1 | 2.1 | UP |
| PERV-A receptor | POPAR | 1.6 | UP |
| Protein kinase, AMP-activated, alpha 1 catalytic subunit | PRKAA1 | 1.7 | UP |
| Proteasome (prosome, macropain) subunit, beta type, 10 | PSMB10 | 2.2 | UP |
| Proteasome (prosome, macropain) activator subunit 2 (PA28 beta) | PSME2 | 1.7 | UP |
| Protein tyrosine phosphatase, non-receptor type 6 | PTPN6 | 1.7 | UP |
| RAP2A, member of RAS oncogene family | RAP2A | 1.6 | UP |
| Radixin | RDX | 1.8 | UP |
| Ribosomal protein S20 | RPS20 | 3.4 | UP |
| MHC class II, DM beta | SBAB-1044B7.2 | 1.6 | UP |
| proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2) | SBAB-554F3.3 | 2.7 | UP |
| MHC class II, DQ alpha | SBAB-591C4.5 /// SLA-DQA1 | 1.8 | UP |
| MHC class I antigen 1 | SLA-1 | 1.6 | UP |
| Major histocompatibility complex, class II, DO alpha | SLA-DOA | 1.8 | UP |
| SLA-DQ beta1 domain | SLA-DQB1 | 1.6 | UP |
| MHC class II DR-alpha | SLA-DRA | 1.6 | UP |
| ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 4 | ST8SIA4 | 2.2 | UP |
| signal transducer and activator of transcription 1 | STAT1 | 1.9 | UP |
| Signal transducer and activator of transcription 5a | STAT5A | 1.6 | UP |
| transporter 1, ATP-binding cassette, sub-family B (MDR/TAP) | TAP1 | 2.2 | UP |
| Testis derived transcript | TES | 2.0 | UP |
| transforming growth factor, beta 1 | TGFB1 | 1.9 | UP |
| Toll-like receptor 4 | TLR4 | 1.7 | UP |
| thymosin beta 10 | TMSB10 | 1.8 | UP |
| TYRO protein tyrosine kinase binding protein | TYROBP | 1.6 | UP |
| Vascular cell adhesion molecule | VCAM1 | 3.3 | UP |
| Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide | YWHAZ | 1.5 | UP |
| Solute carrier family 2 (facilitated glucose ransporter), member 3 |  | 3.2 | UP |
| Voltage-dependent anion channel 2 |  | 2.0 | UP |
| similar to PRDX3 protein |  | 1.8 | UP |
| similar to Olfactory receptor 4K14 (Olfactory receptor OR14-22) |  | 1.7 | UP |
| Signal-regulatory protein alpha |  | 1.6 | UP |
| alpha-stimulatory subunit of GTP-binding protein |  | 1.6 | UP |
| Cardiac muscle alpha actin 1 | ACTC1 | 3.7 | DOWN |
| Adrenomedullin | ADM | 1.8 | DOWN |
| Angiogenin | ANG1 | 2.3 | DOWN |
| Angiopoietin-like 4 | ANGPTL4 | 6.9 | DOWN |
| Bone morphogenetic protein receptor, type IB | BMPR1B | 1.9 | DOWN |
| CD163 molecule | CD163 | 4.1 | DOWN |
| glycine N-methyltransferase | CH242-196P11.5 | 2.5 | DOWN |
| Phosphoenolpyruvate carboxykinase 1 (soluble) | CH242-37G9.2 | 1.6 | DOWN |
| Chloride intracellular channel 5 | CLIC5 | 1.6 | DOWN |
| Carnitine palmitoyltransferase 1A (liver) | CPT1A | 1.8 | DOWN |
| 25-hydroxyvitamin D3 1alpha-hydroxylase | CYP27B1 | 2.7 | DOWN |
| Cytochrome P450 2C36 | CYP2C36 | 4.2 | DOWN |
| DIRAS family, GTP-binding RAS-like 3 | DIRAS3 | 3.6 | DOWN |
| Fatty acid binding protein 4, adipocyte | FABP4 | 1.8 | DOWN |
| Forkhead box O1 | FOXO1 | 1.5 | DOWN |
| Growth hormone receptor | GHR | 2.2 | DOWN |
| Thioltransferase | GLRX1 | 2.6 | DOWN |
| Heme oxygenase (decycling) 1 | HMOX1 | 2.1 | DOWN |
| Heme oxygenase 2 | HO2 | 2.5 | DOWN |
| 90-kDa heat shock protein | HSP90 | 1.7 | DOWN |
| Hyaluronoglucosaminidase 2 | HYAL2 | 1.7 | DOWN |
| Kruppel-like factor 15 | KLF15 | 2.7 | DOWN |
| Aquaporin 11 | LOC100127151 | 2.0 | DOWN |
| similar to TAF11 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 28kDa | LOC100151814 | 2.0 | DOWN |
| similar to ARV1 homolog (S. cerevisiae) | LOC100151849 | 1.8 | DOWN |
| similar to oxidoreductase NAD-binding domain containing 1 | LOC100151869 | 1.6 | DOWN |
| similar to myosin light chain kinase | LOC100152091 | 1.7 | DOWN |
| similar to CG15738 CG15738-PA | LOC100152224 | 2.0 | DOWN |
| similar to 5-formyltetrahydrofolate cyclo-ligase (5,10-methenyl-tetrahydrofolate synthetase) (Methenyl-THF synthetase) (MTHFS) | LOC100152422 | 1.5 | DOWN |
| similar to cyclophilin D | LOC100152612 | 1.6 | DOWN |
| similar to carbonic anhydrase IX | LOC100152792 | 2.4 | DOWN |
| similar to Mitochondrial import receptor subunit TOM20 homolog (Mitochondrial 20 kDa outer membrane protein) (Outer mitochondrial membrane receptor Tom20) | LOC100152814 | 1.5 | DOWN |
| similar to KIAA0020 protein | LOC100152831 | 2.2 | DOWN |
| similar to breast cancer antiestrogen resistance 3 | LOC100153143 | 3.5 | DOWN |
| similar to Protein FAM65A | LOC100153156 | 4.4 | DOWN |
| similar to GTPase-like protein | LOC100153322 | 1.5 | DOWN |
| similar to Atrial natriuretic peptide receptor A precursor (ANP-A) (ANPRA) (GC-A) (Guanylate cyclase) (NPR-A) (Atrial natriuretic peptide A-type receptor) | LOC100153508 | 1.5 | DOWN |
| similar to transmembrane protein 110 | LOC100153598 | 2.0 | DOWN |
| similar to Cysteine and glycine-rich protein 2 (Cysteine-rich protein 2) (CRP2) (Smooth muscle cell LIM protein) (SmLIM) (LIM domain only protein 5) | LOC100153630 | 2.7 | DOWN |
| similar to Down syndrome critical region gene 1-like 1 protein | LOC100153773 | 2.1 | DOWN |
| similar to spermatid perinuclear RNA-binding protein | LOC100154039 | 1.7 | DOWN |
| similar to solute carrier family 46, member 3 | LOC100154155 | 2.5 | DOWN |
| similar to Golgi-specific brefeldin A-resistance guanine nucleotide exchange factor 1 (BFA-resistant GEF 1) | LOC100154193 | 1.7 | DOWN |
| similar to Ku70=DNA-dependent protein kinase 70 kda DNA-binding subunit/DNA-PK Ku70 subunit | LOC100154200 | 1.5 | DOWN |
| similar to chromosome 9 open reading frame 61 | LOC100154289 | 2.3 | DOWN |
| similar to retinol dehydrogenase 11 | LOC100154684 | 2.1 | DOWN |
| similar to plasma carboxypeptidase B2 isoform a preproprotein | LOC100155038 | 1.7 | DOWN |
| similar to O-6-methylguanine-DNA methyltransferase | LOC100155050 | 1.5 | DOWN |
| similar to ROR gamma T protein | LOC100155109 | 1.9 | DOWN |
| similar to CG12125 CG12125-PA | LOC100155132 | 1.6 | DOWN |
| similar to glycoprotein m6b | LOC100155237 | 1.9 | DOWN |
| similar to hydroxysteroid dehydrogenase like 2 | LOC100155587 | 1.8 | DOWN |
| similar to interferon regulatory factor 2 binding protein 2 | LOC100155646 | 1.6 | DOWN |
| similar to Coenzyme Q6 homolog, monooxygenase (S. cerevisiae) | LOC100155731 | 1.6 | DOWN |
| similar to arginase, type II | LOC100155893 | 5.2 | DOWN |
| similar to Vacuolar proton pump subunit E 1 (V-ATPase subunit E 1) (V-ATPase 31 kDa subunit) (P31) | LOC100156112 | 1.7 | DOWN |
| similar to cutA divalent cation tolerance homolog | LOC100156219 | 1.5 | DOWN |
| similar to Erythroid differentiation-related factor 1 | LOC100156269 | 1.6 | DOWN |
| similar to BCL2-associated athanogene 3 | LOC100156989 | 2.6 | DOWN |
| similar to WD repeat domain 23 | LOC100157270 | 1.7 | DOWN |
| similar to SNX25 protein | LOC100157280 | 1.9 | DOWN |
| similar to lin-52 homolog | LOC100157325 | 1.6 | DOWN |
| similar to AP1B1 | LOC100157709 | 1.7 | DOWN |
| similar to Transcription factor MafB (V-maf musculoaponeurotic fibrosarcoma oncogene homolog B) | LOC100157756 | 1.8 | DOWN |
| similar to F-box only protein 21 | LOC100157989 | 1.6 | DOWN |
| Ribosomal protein S23 | LOC396638 | 1.8 | DOWN |
| Cystathionase | LOC733654 | 1.9 | DOWN |
| Claudin 2 | LOC733684 | 2.1 | DOWN |
| Mannose receptor, C type 1 | MRC1 | 1.8 | DOWN |
| Metallothionein | MT1A | 2.8 | DOWN |
| Odd homeobox 1 protein | OB1 | 1.8 | DOWN |
| Pyruvate dehydrogenase (lipoamide) alpha 1 | PDHA1 | 1.7 | DOWN |
| P450 (cytochrome) oxidoreductase | POR | 1.6 | DOWN |
| Presenilin 2 | PSEN2 | 2.3 | DOWN |
| Prostaglandin reductase 1 | PTGR1 | 2.3 | DOWN |
| Retinoic acid induced 14 | RAI14 | 1.6 | DOWN |
| Ribosomal protein L12 | RPL12 | 1.5 | DOWN |
| Ribosomal protein L23 | RPL23 | 1.5 | DOWN |
| SAR1 homolog B (S. cerevisiae) | SAR1B | 1.5 | DOWN |
| Notch homolog 4 (Drosophila) | SBAB-649D6.4 | 1.5 | DOWN |
| Sirtuin (silent mating type information regulation 2 homolog) 3 (S. cerevisiae) | SIRT3 | 1.6 | DOWN |
| Solute carrier family 2 (facilitated glucose transporter), member 2 | SLC2A2 | 3.5 | DOWN |
| Solute carrier family 7 (cationic amino acid transporter, y+ system), member 7 | SLC7A7 | 1.7 | DOWN |
| Solute carrier family 7 (cationic amino acid transporter, y+ system), member 9 | SLC7A9 | 2.2 | DOWN |
| Speedy homolog A (Xenopus laevis) | SPDYA | 1.5 | DOWN |
| Sulfotransferase family, cytosolic, 1A, phenol-preferring, member 1 | SULT1A1 | 2.2 | DOWN |
| Transient receptor potential cation channel, subfamily C, member 1 | TRPC1 | 1.6 | DOWN |
| Thioredoxin interacting protein | TXNIP | 1.8 | DOWN |
| Ubiquitin A-52 residue ribosomal protein fusion product 1 | UBA52 | 1.7 | DOWN |
| Zinc finger, AN1-type domain 5 | ZFAND5 | 1.6 | DOWN |
| CD163 molecule |  | 3.4 | DOWN |
| similar to LOC781710 protein |  | 2.9 | DOWN |
| RAN, member RAS oncogene family |  | 2.5 | DOWN |
| glycoprotein GP36B |   | 2.3 | DOWN |