

Supporting Information

Taoufik *et al.* 10.1073/pnas.0801447105

Table S1. Genes differentially expressed in WT and TNFRI KO nonoccluded brain tissue

| Function | Accession no. | Fold change |
|--|---------------|-------------|
| Cell death | | |
| Survival motor neuron | U77714 | -8.66 |
| BH3 interacting (with BCL2 family) domain, apoptosis agonist | D83698 | 5.96 |
| Signaling | | |
| v-abl Abelson murine leukemia oncogene 1 | L10656 | -6.93 |
| Chemokine-like receptor 1 | U79525 | -6.48 |
| Estrogen related receptor, α | U85259 | 5.73 |
| 5-Hydroxytryptamine (serotonin) receptor 1B | Z11597 | 6.19 |
| Androgen receptor | X53779 | 6.22 |
| Cytoskeleton | | |
| Sequestosome 1 | U40930 | -6.36 |
| Cortactin | U03184 | 5.68 |
| Actin, β , cytoplasmic | M12481 | 11.69 |
| Laminin, α 5 | U37501 | 15.47 |
| Ion transporters | | |
| Potassium large conductance calcium-activated channel, subfamily M, β member 1 | AF020711 | -12.06 |
| Solute carrier family 16 (monocarboxylic acid transporters), member 1 | AF058055 | -6.14 |
| ATPase, Ca ⁺⁺ transporting, plasma membrane 2 | AF053471 | -6.07 |
| Potassium voltage-gated channel, subfamily H (eag-related), member 1 | U04294 | -6.06 |
| Solute carrier family 6 (neurotransmitter transporter, serotonin), member 4 | AF013604 | -5.45 |
| ATP-binding cassette, sub-family G (WHITE), member 1 | U34920 | -5.22 |
| Friedreich ataxia | U95736 | 5.79 |
| Metabolism | | |
| Prostaglandin I2 (prostacyclin) synthase | AB001607 | -6.81 |
| Tryptophan hydroxylase | J04758 | -6.43 |
| Fatty acid amide hydrolase | U82536 | -5.84 |
| Proprotein convertase subtilisin/kexin type 1 | M58589 | -5.47 |
| Serine (or cysteine) proteinase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1 | M33960 | 5.16 |
| Hypoxanthine guanine phosphoribosyl transferase | J00423 | 5.81 |
| Plasminogen | J04766 | 6.82 |
| Ubiquitin B | X51703 | 7.47 |
| Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide | D78647 | 7.64 |
| Serine (or cysteine) proteinase inhibitor, clade B (ovalbumin), member 2 | X16490 | 7.87 |
| Stress response | | |
| Heat shock protein, 84 kDa 1 | M36829 | -5.78 |
| Transcription/translation | | |
| Nuclear DNA-binding protein | AF031426 | -16.77 |
| NK2 transcription factor related, locus 2 (Drosophila) | U31566 | -5.63 |
| Iroquois related homeobox 3 (Drosophila) | Y15001 | -5.42 |
| fos-like antigen 2 | X83971 | -5.34 |
| Ribosomal protein S29 | L31609 | 12.42 |

This list of genes shows those with transcripts that were different by ≥ 2 -fold in TNFRI KO compared with WT. The genes have been grouped according to known functions (i.e., Entrez definition).

Table S2. Genes differentially expressed in WT and TNFRI KO lesions 3 h after pMCAO

| Function | Accession no. | Fold change |
|---|---------------|-------------|
| Signaling | | |
| Adenomatosis polyposis coli | M88127 | -2.06 |
| raf-related oncogene | M13071 | -2.13 |
| abl proto-oncogene | L10656 | -2.18 |
| DnaJ-like protein 1 | L16953 | -2.65 |
| Multidrug resistance protein 1 | M14757 | -3.20 |
| Serine/arginine-rich protein specific kinase 2 | U92456 | -2.64 |
| Protein tyrosine kinase 6 | U16805 | -2.05 |
| Protein kinase C inhibitor protein 1, zeta | D78647 | -2.52 |
| Protein kinase C inhibitor protein 1, eta | U57311 | 2.19 |
| TRAF family member-associated Nf-kappa B activator | U51907 | 2.03 |
| Presenilin 2 | U57324 | 3.11 |
| Tumor necrosis factor receptor superfamily, member 1b | M59378 | 2.24 |
| Transcription/translation | | |
| ELK1, member of ETS oncogene family | X87257 | -3.14 |
| fos-like antigen 2 (Fra-2) | X83971 | -3.35 |
| DNA polymerase delta 1, catalytic domain | Z21848 | 2.55 |
| Thyroid autoantigen 70 kDa | M38700 | 3.56 |
| CCCTC-binding factor | U51037 | 2.12 |
| Est2 repressor factor | U58533 | 2.02 |
| Cell cycle | | |
| Cyclin-dependent kinase inhibitor 2C | U19596 | -2.31 |
| Development/differentiation | | |
| Myeloblastosis oncogene-like 1 | X82327 | -2.58 |
| Gli oncogene; zinc finger transcription factor | S65038 | -2.09 |
| Eph receptor B4 | Z49085 | -2.47 |
| Eph receptor B2 | L25890 | -2.93 |
| Transferrin receptor | X57349 | 2.07 |
| Clusterin | L08235 | 2.40 |
| Growth factors | | |
| Thrombopoietin receptor | Z22649 | -2.02 |
| Angiotensin converting enzyme | J04946 | -2.13 |
| Insulin-like growth factor binding protein 1 | X81579 | -2.41 |
| Neuroleukin | M14220 | 2.21 |
| MAD homolog 2 (Drosophila) (SMAD 2) | U60530 | 2.39 |
| Cytoskeleton | | |
| Heat shock protein, 25 kDa | U03560 | -2.09 |
| Keratin complex 1, acidic, gene 18 | M11686 | 3.12 |
| Metabolism | | |
| Calcium-binding protein, intestinal | J05186 | -2.27 |
| Glutathione S-transferase, mu 2 | J04696 | 2.38 |
| Glutathione S-transferase, theta 1 | X98055 | -2.20 |
| Ubiquitin B | X51703 | -2.18 |
| Glutathione peroxidase 3 | U13705 | 2.22 |
| Glutathione S-transferase, alpha 2 (Yc2) | J03958 | 2.14 |
| Cell death | | |
| Neuronal death protein DP5 | D83698 | 2.64 |
| Bcl-associated death promoter (BAD) | L37296 | 2.10 |
| Defender against cell death 1 | U83628 | 3.03 |
| Adenosine A1 receptor | U05671 | 3.29 |
| Fas antigen | U39643 | 2.09 |
| Programmed cell death 1 | X67914 | 2.15 |
| CASP8 and FADD-like apoptosis regulator | U97076 | 2.48 |
| Adenosine A2a receptor | U05672 | -3.19 |
| BH3 interacting domain death agonist | U75506 | -3.08 |
| DNA repair | | |
| Excision repair 1 | X07414 | 2.33 |
| DNA excision repair protein ERCC-5 | D16306 | 3.30 |
| RAD23b homolog (S. cerevisiae) | X92411 | 2.44 |
| Translin | X81464 | 2.26 |

This is a list of genes with transcripts that were different by at least 2-fold between WT and TNFRI KO pMCAO. The genes have been grouped accordingly to known functions (i.e., Entrez definition).

Table S3. Genes differentially expressed in WT and TNFRI KO lesions 6 h after pMCAO

| Function | Accession no. | Fold change |
|---|---------------|-------------|
| Signaling | | |
| Adenomatosis polyposis coli | M88127 | 2.32 |
| Lymphocyte protein tyrosine kinase | M12056 | 2.60 |
| Harvey rat sarcoma virus oncogene | Z50013 | 2.60 |
| Neurofibromatosis 2 | L27105 | 3.70 |
| Jun oncogene | J04115 | 3.30 |
| Map3k8 | D13759 | 6.06 |
| Transcription factor RelB | M83380 | 3.00 |
| GTP-binding protein | U10551 | 16.73 |
| Promyelocytic leukemia | U33626 | 3.13 |
| Hemopoietic cell kinase | Y00487 | 2.69 |
| DnaJ-like protein 1 | U28423 | 2.24 |
| Zinc finger protein 36 | M57422 | 2.17 |
| Protein tyrosine phosphatase, receptor type, G | L09562 | 2.72 |
| Heat shock 70-kD protein 5 | D78645 | 3.35 |
| NF- κ B inhibitor β | U19799 | 2.47 |
| Plasminogen activator inhibitor, type I | M33960 | 2.18 |
| IL-12b | M86671 | -2.53 |
| Tumor susceptibility gene 101 | U52945 | -2.29 |
| T-cell lymphoma invasion and metastasis 1 | U05245 | -2.18 |
| MAPK kinase 4 | U18310 | -2.38 |
| Lysosomal-associated protein transmembrane 4A | U34259 | -2.52 |
| MAPK kinase 6 | X97052 | -2.01 |
| PKC, α | M25811 | -2.11 |
| PKC, β | X53532 | -2.18 |
| I-TRAF | U51907 | -2.03 |
| Tnf receptor-associated factor 3 | U21050 | -5.23 |
| CD22 antigen | L16928 | -2.56 |
| CD152 antigen | X05719 | -2.06 |
| Selectin, platelet (p-selectin) ligand | X91144 | -2.02 |
| Growth factors | | |
| Colony-stimulating factor 1 receptor | X68932 | -2.37 |
| Erythropoietin receptor | J04843 | -2.75 |
| Insulin receptor substrate 1 | L24563 | -2.93 |
| Fibroblast growth factor receptor 1 | M28998 | -2.71 |
| GM-CSF-R- α | M85078 | -2.41 |
| Corticotropin-releasing hormone receptor | X72305 | -4.66 |
| Insulin-like growth factor 1 | X04480 | -2.46 |
| Myosin light chain, alkali, nonmuscle | U04443 | -2.14 |
| Small inducible cytokine A4 | M35590 | -2.67 |
| Epidermal growth factor | L21671 | -4.48 |
| Vascular endothelial growth factor | M95200 | -5.06 |
| Nerve growth factor, α | M11434 | -3.32 |
| Tyrosine kinase receptor 1 | X80764 | 5.20 |
| Plasminogen activator, urokinase | X02389 | 2.56 |
| Small inducible cytokine subfamily, member 2 | X53798 | 3.04 |
| Neuroleukin | M14220 | 2.06 |
| Glial cell line derived neurotrophic factor | D49921 | 2.35 |
| Cell cycle | | |
| Cell division cycle 2 homolog (<i>S. pombe</i>)-like 1 | M58633 | 3.82 |
| Cyclin-dependent kinase inhibitor 1A (P21) | U09507 | 2.31 |
| Cell division cycle 25 homolog A (<i>S. cerevisiae</i>) | U27323 | 2.72 |
| Cyclin G | Z37110 | 2.66 |
| Retinoblastoma 1 | M26391 | 2.76 |
| Wee 1 homolog (<i>S. pombe</i>) | D30743 | -2.13 |
| Development/differentiation | | |
| Fyn proto-oncogene | U70324 | 2.14 |
| Engrailed 1 | L12703 | 2.07 |

Table S3. Continued

| Function | Accession no. | Fold change |
|---|---------------|-------------|
| Leukemia inhibitory factor | D26177 | 2.79 |
| POU domain, class 3, transcription factor 1 | X56959 | -2.03 |
| Paired box gene 6 (Pax6) | X63963 | -2.12 |
| Stromal cell-derived factor 1 receptor | D87747 | -3.68 |
| Homeo box B5 | M26283 | -2.57 |
| Kruppel-like factor 3 (basic) | U36340 | -2.23 |
| Growth differentiation factor 9 (BMP15) | X77113 | -2.18 |
| Tissue inhibitor of metalloproteinase 3 | L19622 | -3.11 |
| Thrombopoietin | L34169 | -2.34 |
| Cathepsin B | M14222 | -2.38 |
| Cathepsin D | X53337 | 3.12 |
| Follistatin | Z29532 | 2.72 |
| Cell death | | |
| Defender against cell death 1 | U83628 | 32.22 |
| BCL2-binding athanogene 1 (BAG1) | U17162 | -2.30 |
| DNA repair | | |
| Ligase I, DNA, ATP-dependent | U04674 | -2.83 |
| Translin | X81464 | -2.02 |
| Protein tyrosine kinase 6 | U16805 | -2.05 |
| Transcription/translation | | |
| Transcription factor MTF-1 | X71327 | 2.34 |
| POU domain, class 2, associating factor 1 | U43788 | 2.27 |
| Kruppel-like factor 4 (gut) | U20344 | 9.99 |
| Zinc finger protein, subfamily 1A, 1 (Ikaros) | L03547 | 2.75 |
| Nuclease sensitive element binding protein 1 | X57621 | 2.71 |
| Activating transcription factor 3 | U19118 | 2.04 |
| Transcription factor UBF | X60831 | -2.26 |
| Neuronal function | | |
| 5-hydroxytryptamine (serotonin) receptor 2C | X72230 | -3.66 |
| 5-hydroxytryptamine (serotonin) receptor 1E β | Z14224 | -2.15 |
| Glutamate receptor, ionotropic, AMPA1 (α 1) | X57497 | -2.14 |
| Cytoskeleton | | |
| Keratin complex 2, basic, gene 1 | M10937 | -2.09 |
| Myosin lb | L00923 | -2.99 |
| Myosin light chain, alkali, cardiac atria | M19436 | 2.20 |

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