Supplemental Information

Unique Transcriptional Programs Identify Subtypes of "Acute Kidney Injury"

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Full Methods

Clinical Samples. Emergency Room urine samples were selected at random from our multicenter prospective cohort study[1], using our published criteria for iAKI, vAKI and control. The total cohort was followed solely by sCr kinetics, and in a separate analysis, the cohort was adjudicated using strict criteria including clinical history, time to resolution of elevated sCr (vAKI<72hrs; iAKI≥7days), and rapid responses to volume challenges, aimed at identifying only "gold standard" patients. The adjudication yielded (1) Normals (no fluctuations in sCr, no history of exposure to agents that might cause iAKI such as nephrotoxins, sepsis, obstructive uropathy, rhabdomyolysis), (2) vAKI patients (≥RIFL-R and historical or clinical data suggesting decreased renal perfusion for example due to hyperglycemia, diarrhea, but no history of exposure to agents that might cause iAKI such as nephrotoxins, sepsis, obstructive uropathy, rhabdomyolysis and time limited resolution <3days with fluid therapy or diuretic withdrawal), and finally (3) iAKI patients (≥RIFL-R, with evidence of exposure to stimuli known to induce AKI, but lack of resolution for ≥168hrs). Patients in the later category were more likely to require a renal consultant and undergo dialysis. Hence the iAKI and vAKI cohorts differed by time to resolution but also by their history and severity of clinical outcome.

Patients with documented urinary tract infections and chronic kidney disease were excluded. Standard blood chemistries were collected each day for 7 days post admission as previously published[1]. Representative iAKI patients had acute illnesses due to sepsis and rhabdomyolysis with a 2.56 fold rise in sCr at the time of admission from the Emergency Department and prolonged azotemia ≥7days; these patients were seen by a renal consultant. Representative vAKI patients had an acute illness associated with hyperglycemia, gastroenteritis, and other etiologies which raised the sCr 2.14 fold but resolved within <72hrs, and were not visited by a renal consultant. Control

patients had acute illnesses due to cardiovascular disease and trauma and other etiologies with no rise in sCr.

RNA-sequencing batch effect analysis. The effect of technical variables (batch effects) were examined by inspecting PCA plots versus biological and batch surrogates[2], which did not demonstrate any batch driven data structure, but rather biologically driven separation (Supplemental Figure 5). Additionally, a surrogate variable analysis was performed with the "sva" bioconductor package[3,4], which did not identify any significant association with the tested covariates (RNA extraction and library preparation). Unsupervised cluster analysis was performed on $\log_2$ transformed FPKM values using Spearman correlation as distance and complete linkage as similarity method. No significant differences were seen in mRNA integrity (RIN Agilent 2100 Bioanalyzer) from different samplings and all samples passed the quality controls on post sequencing analysis.

Real-time PCR analysis. Total RNA was isolated and first-strand cDNA was synthesized with Superscript III (Invitrogen). Real-time PCR was performed using LightCycler®96 (Roche) with a SYBR green Supermix reagent (Bio-Rad) and specific primers (Supplementary Table 4). β-actin was quantified as an internal control. ΔΔCt was used to calculate fold amplification of transcripts.

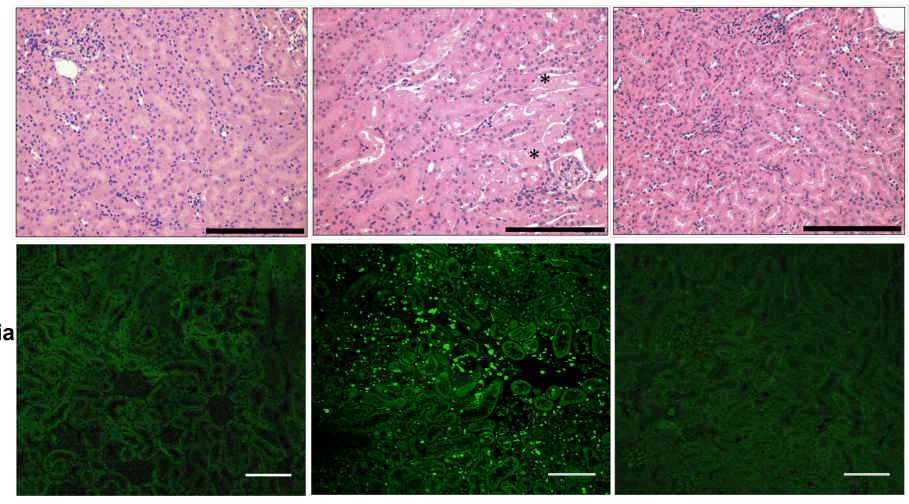
Post LS-MS/MS analysis. Database searches were carried out using Mascot version 2.5.0[5] with the human segment of Uniprot protein database (20, 210 sequences; European Bioinformatics Institute, Swiss Institute of Bioinformatics and Protein Information Resource). The search parameters were as follows: (i) two missed cleavage tryptic site allowed; (ii) precursor ion mass tolerance =10ppm; (iii) fragment ion mass

tolerance=0.8 Da; and variable peptide modifications were allowed for methionine oxidation, deamidation of asparagine to glutamine, protein N-terminal acetylation. If reduction and alkylation was done, carbomidomethylation of cysteine was used as a fixed modification. Decoy database search was always activated and in general, with $p<0.01$, false discovery rate averaged less than 1%.Scaffold (Proteome Software Inc., Portland, OR) version 4.4.1 was used to further validate and cross-tabulate the MS/MS based peptide and protein identifications; protein and peptide probability was set at 95% with a minimum peptide requirement of one. The validity of the proteins was indicated by the spectral counts of NGAL, OPN, CLU in iAKI urine.

Supplemental Figures

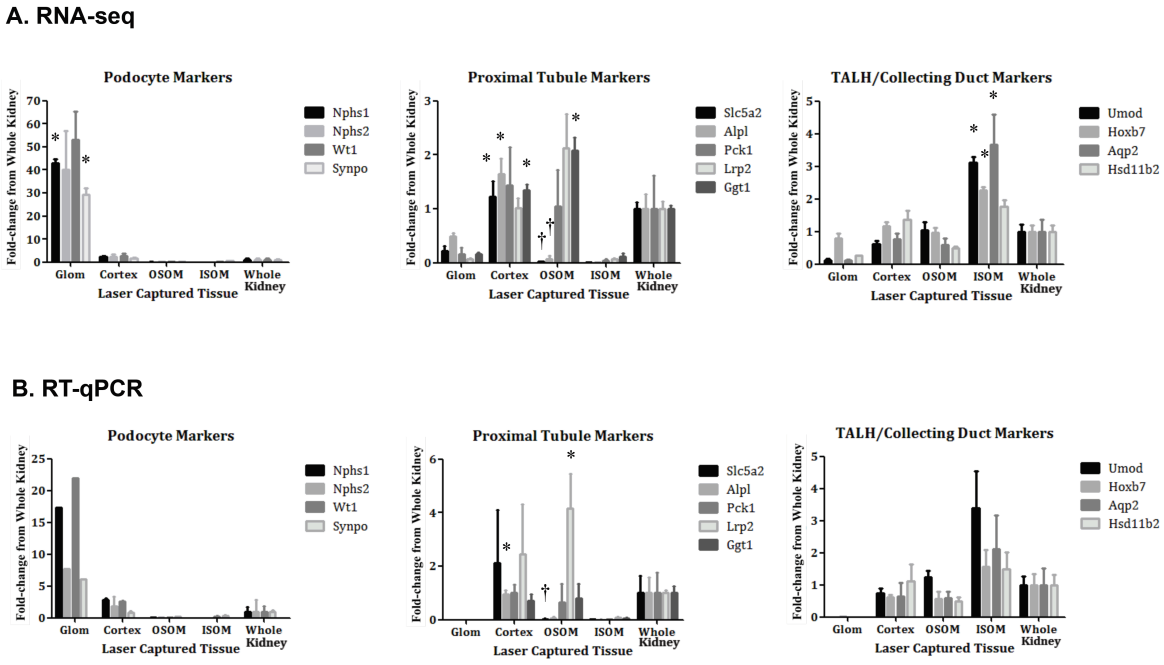
Supplemental Figure 1. Basic metabolic profiles of AKI models. iAKI (10min ischemia, 24hrs of reperfusion) versus vAKI (72hr volume depletion) demonstrate similar RIFLE-R levels of sCr (control: n=3; ischemia: n=6; volume depletion: n=7). Nonetheless, histopathology (H&E) demonstrates acute tubular injury particularly in the outer stripe of the outer medulla (denoted by *pars recta (straight segment S3) of the proximal tubule) in iAKI, but no evidence of acute kidney injury in vAKI or control (Black bars=250μm). TUNEL assay demonstrated focal clusters of apoptotic cells in the cortex and OSOM of iAKI kidneys, while vAKI and control kidneys had scant apoptotic cells (White bars=100μm).

	Control	iAKI: Bilateral Ischemia (24Hr)	vAKI: Volume Depletion (72Hr)
Body weight loss	0%	10%	20%
Crea (mg/dL)	0.20 ± 0	0.30 ± 0.07 **	0.38 ± 0.12 *
BUN (mg/dL)	17.3 ± 6.5	24.7 ± 10.5	44.9 ± 13.7 *†
Na (mmol/L)	146.3 ± 0.6	147 ± 6.4	159.6 ± 3.5 *†
Hct (%PCV)	37.7 ± 2.1	34.7 ± 4.1	46 ± 4.3 *†
Hgb (g/dL)	12.8 ± 0.7	11.8 ± 1.4	15.6 ± 1.5 *†

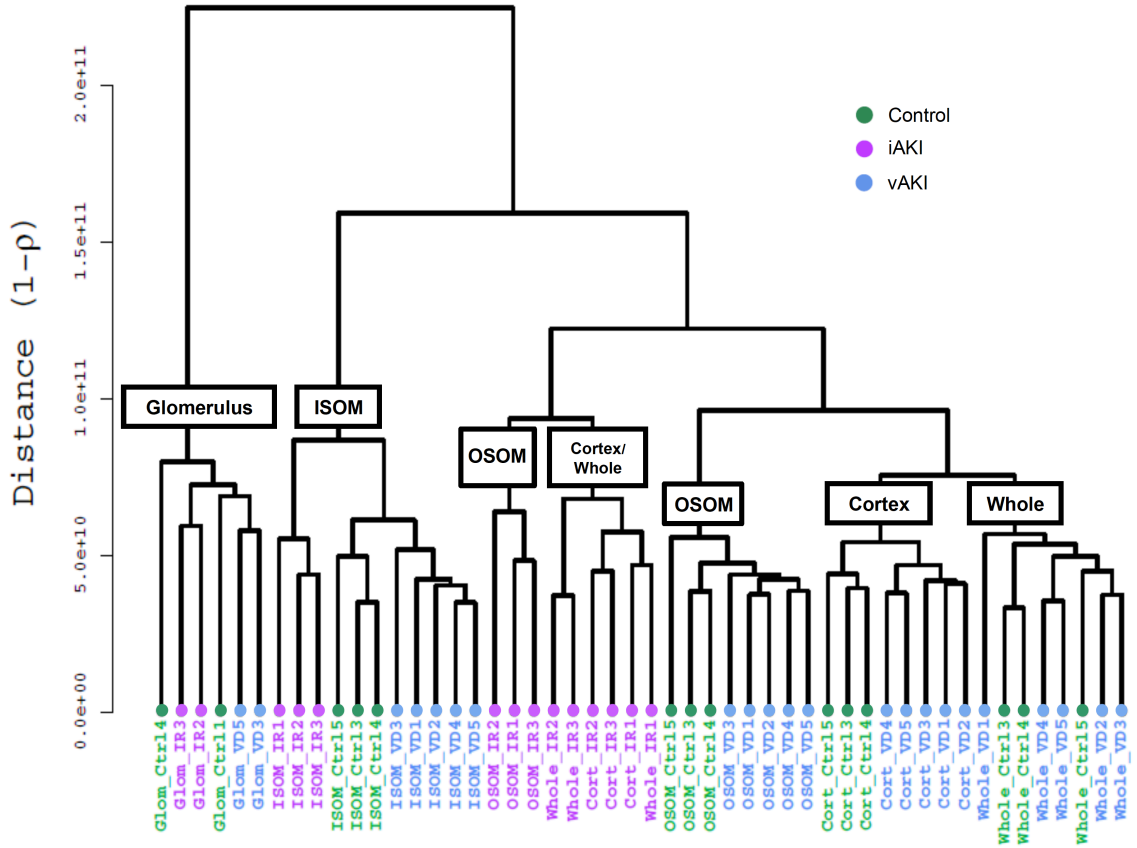


*** p<0.01 *vs.* Control**
**** p<0.05 *vs.* Control**
† p<0.01 *vs.* Ischemia

Supplemental Figure 2. Segment-specific gene expression[6] analysis using (A) RNA-seq and (B) RT-qPCR which confirmed the enrichment of segment specific genes from podocytes, proximal, and distal tubules[6,7] in the appropriate captured RNA pool. Note the segment specific enrichment or de-enrichment in each anatomic compartment compared to whole kidney extracts (n=3 for cortex, OSOM, ISOM, Whole Kidney; n=2 for Glom; * $p<0.05$ compared to every other region, † $p<0.05$ compared to cortex). For example, OSOM was accurately isolated based on the absence of *Slc5a2*[8] and *Alpl*[9] (markers which are found predominantly in the S1 segment). Moreover, whole kidney extracts mirrored cortical genes and recapitulated prior studies[10].



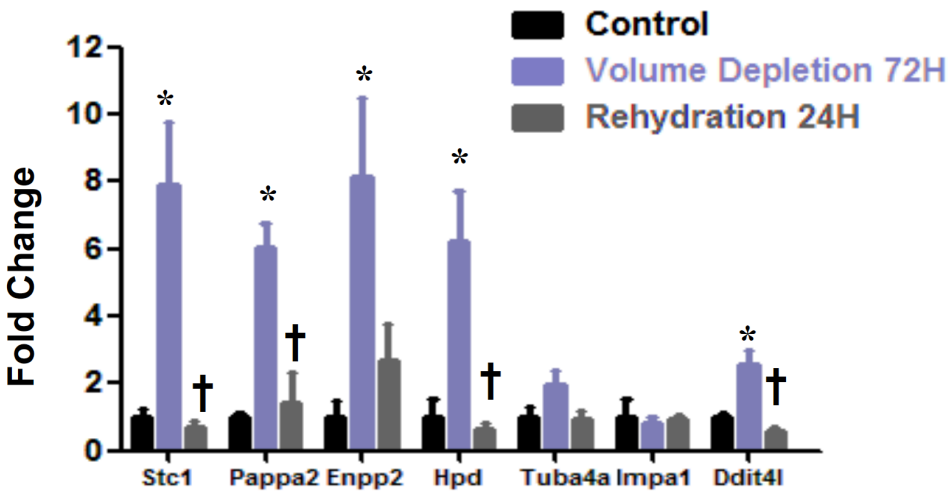
Supplemental Figure 3. iAKI and vAKI models demonstrated unique and regional specific transcriptional profiles in an unsupervised hierarchical clustering analysis of mRNA sequencing of glomerulus, cortex, outer stripe of outer medulla, inner stripe of outer medulla, and whole kidney. The whole transcriptome was clustered using counts, and distance is expressed as 1 – Spearman correlation (ρ). Note that genes stratified by the specific stimulus in different microanatomical regions (glomerulus and ISOM). iAKI agglomerated both the cortex and OSOM. vAKI gene set agglomerated with the control gene set in the Cortex, OSOM and ISOM. vAKI (n=5), iAKI (n=3) and control (n=3) kidneys (i.e. 50 independent samples).



Supplemental Figure 4. Rehydration reverses vAKI gene expression. vAKI mice (n=5) were water/food deprived for 72 hours followed by ad-libitum access to water for 24 hours. Differentially expressed vAKI genes (*Stc1, Pappa2, Enpp2, Hpd*) and sCr and sNa measurements returned to baseline after resuscitation.

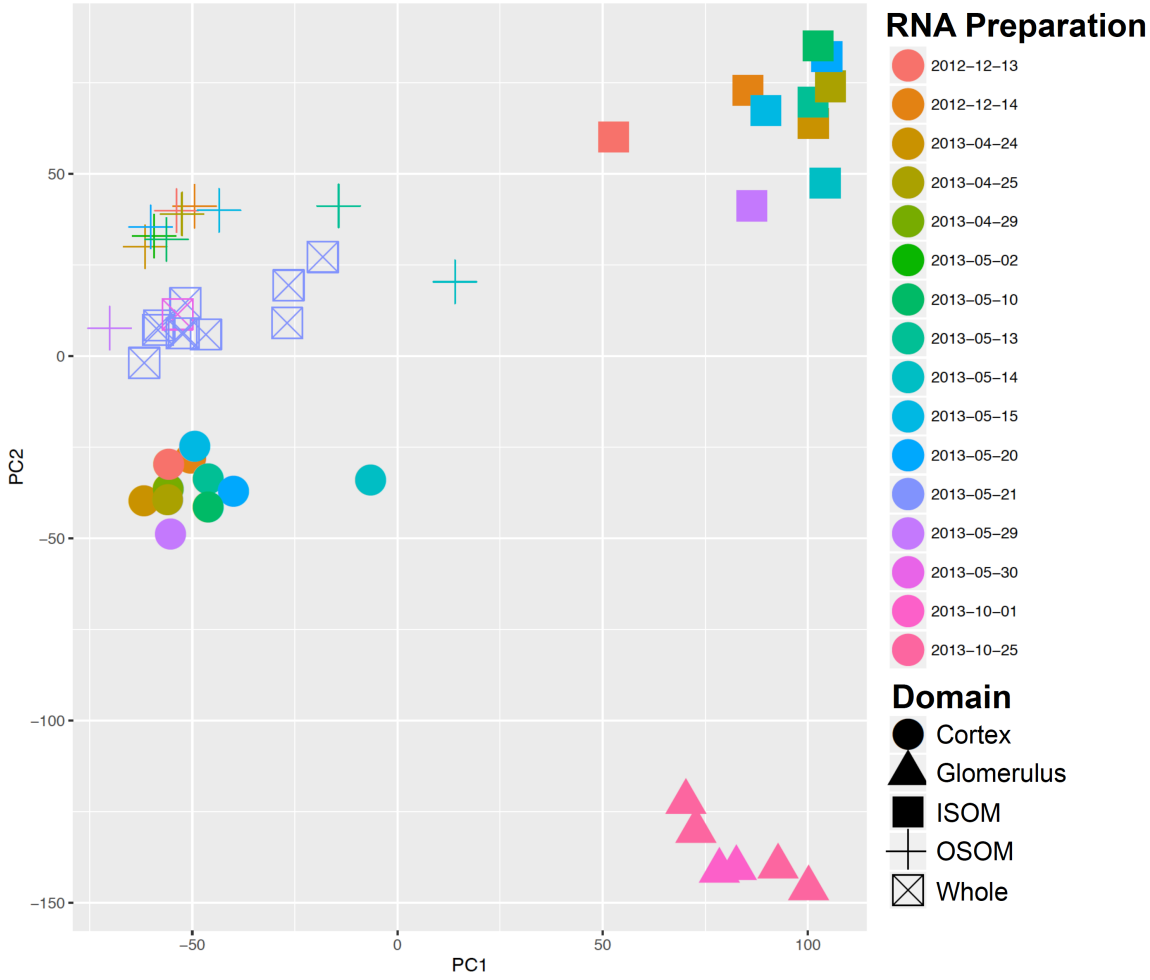
n	sCr (mg/dL)	sNa (mM)
4	0.20 ±0	146.3±0.6
5	0.37± 0.006 *	159.6±3.5 *
5	0.28±0.09	131.4±2.5 †

*p<0.05 Volume Depletion *vs* Control †p<0.05 Volume Depletion *vs* Rehydration 24Hr



*p<0.05 Volume Depletion *vs* Control †p<0.05 Volume Depletion *vs* Rehydration 24Hr

Supplemental Figure 5. Principal component analysis (PC1 vs PC2) of RNA extraction on different days from different regions of the kidney. Note that the data clustered according to kidney domain.



Supplemental Table Legends

Supplemental Table 1A. 1158 differentially expressed iAKI genes (≥2-fold change, $p<10^{-5}$) were not significantly expressed in vAKI. Table shows fold change from control; genes were ranked by q-value. Only FPKM values with significant fold change ($q < 0.01$) from control are reported. NS: non-significant. Expression pattern displays relative FPKM expression values, row normalized to the highest FPKM across all regions and conditions.

Supplemental Table 1B. 103 differentially expressed vAKI genes (≥2-fold change, $p<10^{-5}$) were not significantly expressed in iAKI. Table shows fold change from control genes were ranked by q-value. Only FPKM values with significant fold change ($q < 0.01$) from control are reported. NS: non-significant. Expression pattern displays relative FPKM expression values, row normalized to the highest FPKM across all regions and conditions.

Supplemental Table 2. Published iAKI biomarkers are specific to the iAKI model[11]. They are not expressed in the vAKI model. The region with most significant fold change was reported for each condition. Only FPKM values with significant fold change ($q < 0.01$) from control are reported. The expression pattern displays relative FPKM expression values, row normalized to the highest FPKM across regions and conditions. NS: non-significant.

Supplemental Table 3A. 267 secreted proteins induced by iAKI (≥1-fold change, $p<10^{-5}$) annotated in the Max Planck Unified Proteome Database or the Secretonome database and expressed at FPKM levels >1. Table shows fold change from control. Genes were ranked by q-value. Only FPKM values with significant fold change ($q < 0.01$)

from control are reported. NS: non-significant. Expression pattern displays relative FPKM expression values, row normalized to the highest FPKM across all regions and conditions.

Supplemental Table 3B. 30 secreted proteins induced by vAKI (≥1-fold change, $p<10^{-5}$) annotated in the Max Planck Unified Proteome Database or the Secretonome database and expressed at FPKM levels >1. Table shows fold change from control. Genes were ranked by q-value. Only FPKM values with significant fold change ($q < 0.01$) from control are reported. NS: non-significant. Expression pattern displays relative FPKM expression values, row normalized to the highest FPKM across all regions and conditions.

Supplemental Table 4. qPCR primer sequences of nephron segment specific genes and of iAKI and vAKI specific genes.

Supplemental References

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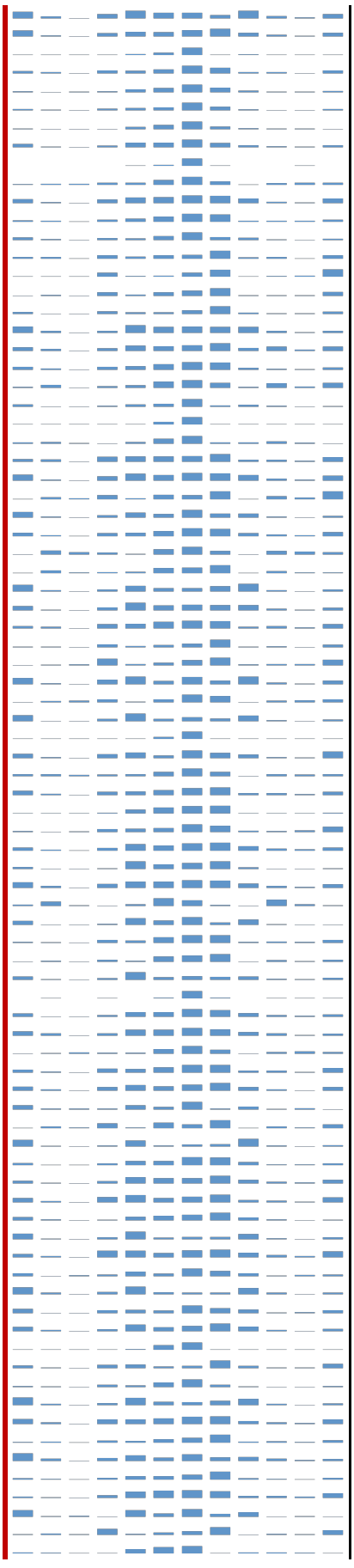
Supplemental Table 1A

	iAKI - ISCHEMIA REPERFUSION			vAKI - VOLUME DEPLETION			EXPRESSION PATTERN (FPKM)											
	Region with	Fold		Region with	Fold		Control				Ischemia				Volume Depletion			
GENE	Most Significant Fold Change	Change	P-value	Most Significant Fold Change	Change	P-Value	GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Plat	OSOM	26.47	1.75E-36			NS												
Cd68	OSOM	17.29	1.92E-33			NS												
Il34	OSOM	9.51	5.61E-31			NS												
Rdh11	OSOM	6.30	4.58E-30			NS												
Anxa3	OSOM	10.57	2.88E-29			NS												
Steap1	OSOM	48.10	5.67E-29			NS												
Pvr	OSOM	9.16	6.64E-29			NS												
Spp1	OSOM	49.50	3.44E-27			NS												
Lgals3	OSOM	14.52	1.56E-26			NS												
Cxcl1	OSOM	219.96	6.09E-26			NS												
Gale	OSOM	6.79	1.63E-25			NS												
Nop56	OSOM	3.59	2.95E-25			NS												
Cbr3	Cortex	11.12	3.17E-25			NS												
Tubb5	OSOM	5.11	1.29E-24			NS												
Rrad	OSOM	12.88	1.07E-23			NS												
Anxa2	OSOM	9.54	1.42E-23			NS												
Plaur	OSOM	19.74	1.65E-23			NS												
Cd14	OSOM	15.97	8.42E-23			NS												
Srxn1	OSOM	7.83	9.02E-23			NS												
F2rl1	OSOM	5.58	3.02E-22			NS												
Ppa1	ISOM	2.71	3.78E-22			NS												
Tmem43	OSOM	3.12	5.03E-22			NS												
Lcn2	OSOM	214.29	6.10E-22			NS												
Sptlc2	OSOM	3.43	7.97E-22			NS												
Chrnb1	OSOM	5.44	8.55E-22			NS												
Tuba1b	OSOM	3.75	1.84E-21			NS												
Nans	OSOM	3.28	4.22E-21			NS												
Arnt2	OSOM	4.60	8.29E-21			NS												
Slc25a24	OSOM	9.98	1.03E-20			NS												
Ngf	OSOM	6.61	1.29E-20			NS												
Ywhah	OSOM	3.56	2.63E-20			NS												
Nup93	OSOM	4.26	3.04E-20			NS												
Sfn	OSOM	16.45	4.21E-20			NS												
Lrg1	OSOM	68.88	4.54E-20			NS												
Cxadr	OSOM	3.45	6.40E-20			NS												
Timd2	OSOM	44.47	1.03E-19			NS												
Gdf15	OSOM	26.60	3.15E-19			NS												
Sdc4	OSOM	3.61	5.16E-19			NS												
Slc3a2	OSOM	3.80	6.33E-19			NS												
Car13	OSOM	17.74	8.09E-19			NS												
Tuba1c	OSOM	4.12	1.54E-18			NS												
Gprc5a	OSOM	13.31	1.73E-18			NS												
Gch1	OSOM	12.74	2.22E-18			NS												
Prr15	ISOM	6.81	3.49E-18			NS												
Aldh18a1	OSOM	8.50	3.64E-18			NS												
Vasp	OSOM	3.24	5.89E-18			NS												
Rgs19	OSOM	3.82	6.37E-18			NS												
Slc2a1	OSOM	3.41	1.13E-17			NS												
Tes	OSOM	3.85	1.15E-17			NS												
Lhfpl2	OSOM	6.33	1.49E-17			NS												
Litaf	OSOM	4.97	2.84E-17			NS												
Slc7a1	OSOM	3.54	2.97E-17			NS												
Myof	OSOM	5.31	3.24E-17			NS												
Nop58	OSOM	3.05	6.52E-17			NS												
Smad2	OSOM	2.32	6.54E-17			NS												
Rcc1	OSOM	2.87	1.75E-16			NS												
Acsl5	ISOM	2.40	1.84E-16			NS												
Bag2	OSOM	4.49	1.92E-16			NS												
Pold4	OSOM	3.37	2.21E-16			NS												
Defb1	OSOM	5.79	2.51E-16			NS												
Pea15a	OSOM	4.45	2.60E-16			NS												
Rin1	OSOM	10.68	2.66E-16			NS												
Smox	OSOM	8.72	3.06E-16			NS												
Vtcn1	OSOM	20.54	3.07E-16			NS												
Spcs3	OSOM	2.99	3.39E-16			NS												
Cks1b	OSOM	6.37	4.00E-16			NS												
Arpc1b	OSOM	3.86	5.35E-16			NS												
Ankrd1	OSOM	19.44	5.83E-16			NS												
Plp2	OSOM	4.25	6.89E-16			NS												
Tex10	OSOM	2.24	7.08E-16			NS												
Klf6	OSOM	5.90	7.75E-16			NS												
Rras2	OSOM	4.56	8.49E-16			NS												
Pold1	OSOM	4.95	8.62E-16			NS												
Cd9	OSOM	3.19	9.96E-16			NS												
Slc39a6	OSOM	3.32	1.21E-15			NS												
Tmem158	OSOM	8.42	1.40E-15			NS												
Taf4b	OSOM	4.04	2.00E-15			NS												
Ctsc	OSOM	4.23	2.01E-15			NS												
Nfkb2	OSOM	4.27	2.26E-15			NS												
Aldh1l2	ISOM	27.89	2.51E-15			NS												
Acsl4	OSOM	6.76	2.67E-15			NS												

Carhsp1	OSOM	2.45	2.74E-15	NS	
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Vat1	OSOM	4.41	8.67E-15	NS	
Trmt61a	OSOM	4.25	9.80E-15	NS	
Rap2b	OSOM	6.07	9.91E-15	NS	
Bzw2	OSOM	3.23	1.41E-14	NS	
Sult2b1	OSOM	6.01	1.86E-14	NS	
Phgdh	OSOM	6.02	2.01E-14	NS	
Cd24a	OSOM	5.11	2.22E-14	NS	
Hn1	OSOM	4.24	2.40E-14	NS	
Rhou	OSOM	8.41	2.63E-14	NS	
Ranbp1	OSOM	2.62	2.84E-14	NS	
Setd8	OSOM	2.17	2.92E-14	NS	
Tnfrsf23	OSOM	11.29	3.14E-14	NS	
Fga	OSOM	30.54	3.27E-14	NS	
Rcan1	OSOM	6.50	3.38E-14	NS	
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Slc39a10	OSOM	2.89	4.41E-14	NS	
Bspry	OSOM	2.91	6.95E-14	NS	
Kctd5	OSOM	2.82	7.87E-14	NS	
Ept1	OSOM	2.48	1.12E-13	NS	
Galnt3	OSOM	2.55	1.13E-13	NS	
Olfm4	ISOM	8.66	1.18E-13	NS	
Trim47	OSOM	4.10	1.21E-13	NS	
Relb	OSOM	5.08	1.22E-13	NS	
Pwp1	OSOM	2.41	1.23E-13	NS	
Lamc2	OSOM	6.08	1.29E-13	NS	
Sphk1	OSOM	5.15	1.42E-13	NS	
Hspb1	OSOM	6.53	1.56E-13	NS	
Cldn7	OSOM	3.58	1.6E-13	NS	
Tpm4	OSOM	3.07	1.8E-13	NS	
Krt20	OSOM	1643.38	1.99E-13	NS	
Tnc	OSOM	27.90	2.06E-13	NS	
Hsd17b12	OSOM	2.08	2.29E-13	NS	
Pinx1	OSOM	3.23	2.34E-13	NS	
Akr1b8	OSOM	35.13	2.63E-13	NS	
Xbp1	OSOM	3.32	2.98E-13	NS	
Mad2l2	OSOM	2.86	3.45E-13	NS	
Socs3	OSOM	22.44	3.45E-13	NS	
Sae1	OSOM	2.06	3.77E-13	NS	
Agpat9	OSOM	3.76	3.78E-13	NS	
Efhd2	OSOM	4.33	4.15E-13	NS	
Eif4ebp1	OSOM	4.63	4.4E-13	NS	
Cldn4	OSOM	17.72	4.41E-13	NS	
Osmr	OSOM	5.55	4.43E-13	NS	
Fam83a	OSOM	1907.38	4.48E-13	NS	
Pprc1	OSOM	3.77	4.84E-13	NS	
Wdr77	OSOM	2.34	5.21E-13	NS	
Psmd11	OSOM	2.47	5.46E-13	NS	
Ifrd1	OSOM	3.76	6.4E-13	NS	
Prmt1	OSOM	2.23	6.6E-13	NS	
Tnfrsf1b	OSOM	3.92	6.93E-13	NS	
Susd1	OSOM	3.93	7.1E-13	NS	
Itga3	OSOM	4.14	7.19E-13	NS	
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Tmbim1	OSOM	2.21	1.3E-12	NS	
Nup62	OSOM	2.09	1.31E-12	NS	
Rell1	OSOM	3.75	1.41E-12	NS	
Alcam	OSOM	2.74	1.77E-12	NS	
Lig1	OSOM	4.37	1.88E-12	NS	
Gadd45a	OSOM	5.90	1.92E-12	NS	
Fgg	OSOM	108.21	1.95E-12	NS	
Cpne8	OSOM	3.52	2E-12	NS	
Smpdl3b	OSOM	13.27	2.25E-12	NS	
Golm1	OSOM	4.81	2.31E-12	NS	
Rrp8	OSOM	2.11	2.35E-12	NS	
Kctd1	OSOM	6.25	2.47E-12	NS	
Mettl21a	OSOM	2.50	2.5E-12	NS	
Tmem173	OSOM	7.74	2.5E-12	NS	
Maff	OSOM	7.51	2.5E-12	NS	
Plscr1	OSOM	3.06	2.58E-12	NS	
Tmem171	OSOM	3.67	2.65E-12	NS	
C3	OSOM	13.62	2.68E-12	NS	

Pcna	OSOM	2.82	2.88E-12	NS	
Fen1	OSOM	3.68	2.89E-12	NS	
A130040M12Rik	OSOM	28.06	2.89E-12	NS	
Rad18	OSOM	6.48	3.04E-12	NS	
Eif6	OSOM	3.25	3.34E-12	NS	
Ptpn12	OSOM	2.53	3.43E-12	NS	
Kcnh1	ISOM	16.14	3.48E-12	NS	
Hsd3b7	OSOM	2.31	3.63E-12	NS	
Npl	OSOM	4.61	3.68E-12	NS	
Gmds	ISOM	2.40	3.8E-12	NS	
Serpina3n	Cortex	24.04	3.81E-12	NS	
Msn	OSOM	3.83	4.54E-12	NS	
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Mboat1	OSOM	6.21	5.17E-12	NS	
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Nupr1	OSOM	6.53	5.63E-12	NS	
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Krt8	OSOM	4.00	6.21E-12	NS	
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Lsr	OSOM	2.25	9.24E-12	NS	
Dusp5	OSOM	53.86	9.66E-12	NS	
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Vopp1	OSOM	3.02	1.07E-11	NS	
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B4galnt1	OSOM	3.65	1.18E-11	NS	
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Gpm6b	OSOM	3.09	1.45E-11	NS	
5830416P10Rik	OSOM	45.80	1.52E-11	NS	
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Tubb6	OSOM	4.72	1.6E-11	NS	
Cxcl2	Cortex	426.35	1.69E-11	NS	
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Wars	OSOM	2.03	1.76E-11	NS	
Akap2	OSOM	3.35	1.82E-11	NS	
Adm2	ISOM	38.36	1.85E-11	NS	
Emp2	OSOM	4.69	2.01E-11	NS	
Mall	OSOM	14.90	2.13E-11	NS	
Il11	OSOM	256.12	2.22E-11	NS	
Tgfb1	OSOM	3.31	2.3E-11	NS	
Myc	OSOM	14.19	2.3E-11	NS	
Enc1	OSOM	5.63	2.31E-11	NS	
Saa1	OSOM	726.38	2.71E-11	NS	
Sema3c	Cortex	3.26	2.74E-11	NS	
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Plin2	Cortex	7.24	3.03E-11	NS	
Epha2	OSOM	5.99	3.12E-11	NS	
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Havcr1	OSOM	536.63	3.54E-11	NS	
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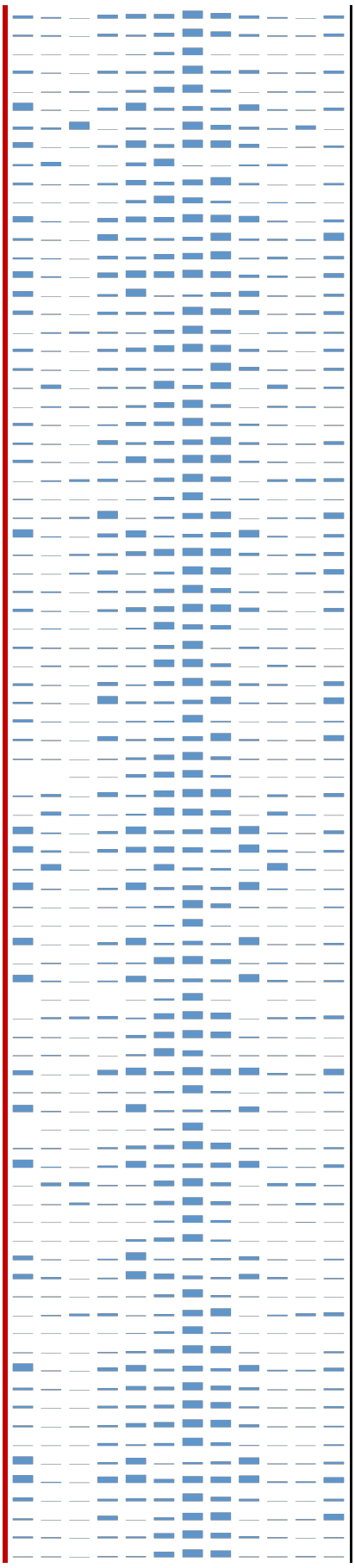
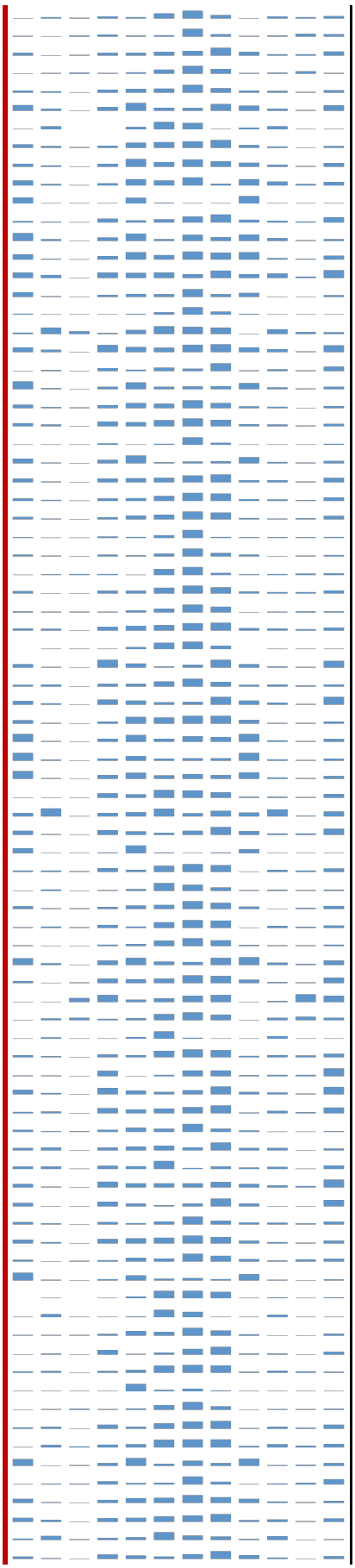
Cenpt	OSOM	4.21	3.58E-11	NS	
Gsr	ISOM	2.48	3.63E-11	NS	
Ctps	Cortex	3.66	3.68E-11	NS	
Slc34a2	Cortex	16.76	3.85E-11	NS	
Timp1	OSOM	123.42	3.87E-11	NS	
Fxyd5	OSOM	3.29	4.27E-11	NS	
Rhoc	OSOM	3.33	4.45E-11	NS	
Uhrf1	OSOM	17.43	4.64E-11	NS	
Serinc2	ISOM	2.85	4.68E-11	NS	
Sprr1a	OSOM	49.09	4.69E-11	NS	
Rangap1	ISOM	2.18	4.72E-11	NS	
Rock2	OSOM	2.29	4.92E-11	NS	
Tnfrsf10b	OSOM	5.00	5.01E-11	NS	
Hbegf	OSOM	6.80	5.09E-11	NS	
Cad	OSOM	3.34	5.37E-11	NS	
Runx1	OSOM	13.98	5.63E-11	NS	
Lrrfip1	OSOM	2.27	5.73E-11	NS	
Klf16	OSOM	2.30	5.94E-11	NS	
Mcm4	OSOM	4.24	5.97E-11	NS	
Chmp4c	OSOM	2.91	6.13E-11	NS	
Mybbp1a	OSOM	2.73	6.27E-11	NS	
Trib3	OSOM	15.81	6.33E-11	NS	



Hsp90aa1	OSOM	2.64	6.71E-11	NS	
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Lmnb2	Cortex	2.08	7.86E-11	NS	
Asns	Cortex	5.58	8.34E-11	NS	
Rpa2	OSOM	3.19	9.03E-11	NS	
Praf2	OSOM	2.63	9.93E-11	NS	
Calcr	OSOM	469.11	1E-10	NS	
Ppp1r14b	OSOM	3.96	1.02E-10	NS	
Cklf	OSOM	4.21	1.03E-10	NS	
Mical2	OSOM	4.42	1.06E-10	NS	
Nes	OSOM	3.87	1.07E-10	NS	
Ppp1r13l	OSOM	3.55	1.07E-10	NS	
Cpe	OSOM	3.70	1.07E-10	NS	
Plod3	OSOM	2.30	1.12E-10	NS	
Sowahc	OSOM	2.46	1.32E-10	NS	
Mcm3	OSOM	7.54	1.33E-10	NS	
Adam8	OSOM	34.13	1.35E-10	NS	
Nme1	ISOM	2.26	1.35E-10	NS	
8430410A17Rik	OSOM	2.26	1.39E-10	NS	
Tacstd2	OSOM	4.26	1.53E-10	NS	
Homer3	OSOM	3.10	1.54E-10	NS	
Ptpn2	OSOM	2.18	1.64E-10	NS	
Wdr43	OSOM	2.18	1.73E-10	NS	
Rnf39	OSOM	16.89	1.75E-10	NS	
Nbl1	OSOM	3.08	1.77E-10	NS	
Morf4l2	OSOM	2.29	1.91E-10	NS	
Noc4l	OSOM	2.40	1.95E-10	NS	
Ran	OSOM	2.39	1.98E-10	NS	
Fam82a1	OSOM	3.44	2.01E-10	NS	
Mcm5	OSOM	8.09	2.05E-10	NS	
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Ddx21	OSOM	2.72	2.31E-10	NS	
Aen	ISOM	2.72	2.43E-10	NS	
Camk2n2	OSOM	4.98	2.43E-10	NS	
Sprr2g	Cortex	411.58	2.43E-10	NS	
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Slc7a6	OSOM	2.84	2.64E-10	NS	
Slc39a1	OSOM	2.23	2.65E-10	NS	
Heatr5a	OSOM	2.59	2.72E-10	NS	
Mast4	OSOM	3.66	2.76E-10	NS	
Ier5	OSOM	3.19	2.77E-10	NS	
9930013L23Rik	Cortex	20.49	2.82E-10	NS	
Plekhb2	OSOM	2.52	2.84E-10	NS	
Micall1	OSOM	2.19	2.98E-10	NS	
Pdpn	OSOM	3.76	3.24E-10	NS	
Utp18	OSOM	2.08	3.28E-10	NS	
Pgd	Cortex	2.72	3.36E-10	NS	
Mre11a	OSOM	2.45	3.43E-10	NS	
Rdh10	OSOM	5.59	3.67E-10	NS	
Ipo4	OSOM	2.33	3.69E-10	NS	
Ssbp4	OSOM	2.83	4.07E-10	NS	
Cast	OSOM	2.42	4.1E-10	NS	
Frzb	Cortex	4.47	4.25E-10	NS	
Vmp1	ISOM	2.95	4.61E-10	NS	
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Tars	OSOM	2.56	4.68E-10	NS	
Parm1	OSOM	6.49	5.05E-10	NS	
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Cd44	OSOM	8.86	5.34E-10	NS	
Spns2	OSOM	4.25	5.48E-10	NS	
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Stap2	OSOM	2.62	6.04E-10	NS	
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Bcmo1	OSOM	16.02	7.92E-10	NS	
Il1b	OSOM	13.35	7.95E-10	NS	
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Fbl	OSOM	2.78	9.02E-10	NS	
S100a9	OSOM	157.39	9.26E-10	NS	
Ptrh1	OSOM	5.98	9.75E-10	NS	
Sdad1	OSOM	2.27	9.89E-10	NS	
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Liph	OSOM	6.30	1.07E-09	NS	
E2f4	OSOM	2.19	1.07E-09	NS	
Alyref	OSOM	2.09	1.08E-09	NS	
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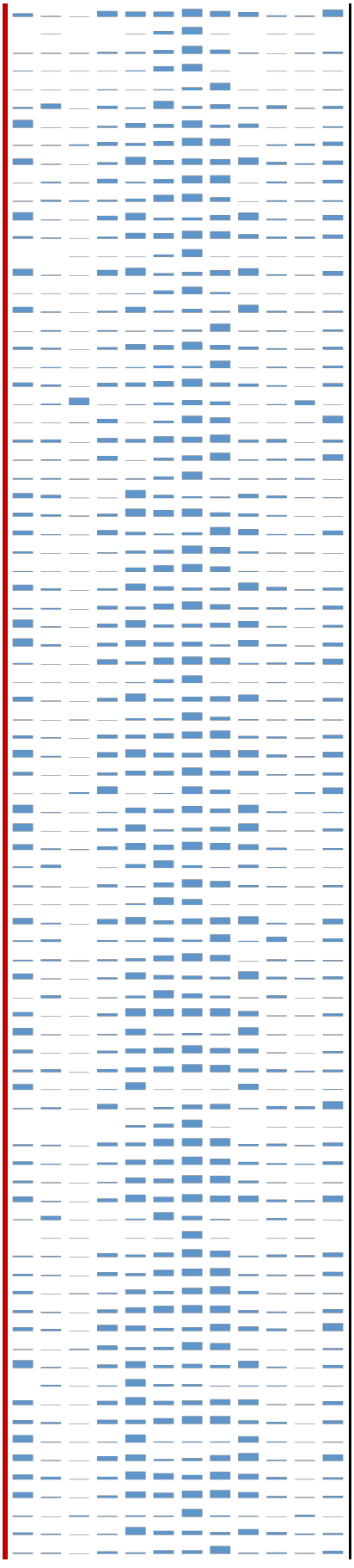
Hgsnat	OSOM	2.16	1.14E-09	NS	
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Hesx1	OSOM	18.42	1.32E-09	NS	
Cpox	OSOM	2.70	1.32E-09	NS	
Mlkl	OSOM	7.07	1.33E-09	NS	
Eif1a	OSOM	2.31	1.34E-09	NS	
Fosl2	OSOM	5.23	1.35E-09	NS	
Krt18	OSOM	5.88	1.36E-09	NS	
Cstb	OSOM	2.45	1.39E-09	NS	
Slc12a4	OSOM	2.37	1.39E-09	NS	
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Gda	OSOM	4.29	2.05E-09	NS	
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Rbm38	OSOM	3.32	2.11E-09	NS	
1110007C09Rik	OSOM	2.27	2.14E-09	NS	
Tgfbr2	OSOM	2.53	2.23E-09	NS	
Cpne7	OSOM	6.45	2.34E-09	NS	
Nmt2	OSOM	2.52	2.34E-09	NS	
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Cdsn	OSOM	11.91	2.53E-09	NS	
Pwp2	OSOM	2.38	2.58E-09	NS	
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Ywhag	OSOM	2.35	2.59E-09	NS	
Slc4a11	OSOM	3.41	2.66E-09	NS	
Serpine1	OSOM	20.06	2.69E-09	NS	
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Csda	OSOM	2.56	2.71E-09	NS	
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Gpr110	OSOM	248.94	3.11E-09	NS	
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Chka	OSOM	2.37	4.17E-09	NS	
Dspp	OSOM	173.09	4.22E-09	NS	
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Btg2	OSOM	8.13	4.6E-09	NS	
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Abpb	OSOM	16.48	4.71E-09	NS	
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Upp1	OSOM	2.45	5.12E-09	NS	
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Pa2g4	OSOM	2.08	5.6E-09	NS	
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Mid1	OSOM	3.79	5.79E-09	NS	
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Isg20	OSOM	3.94	6.1E-09	NS	
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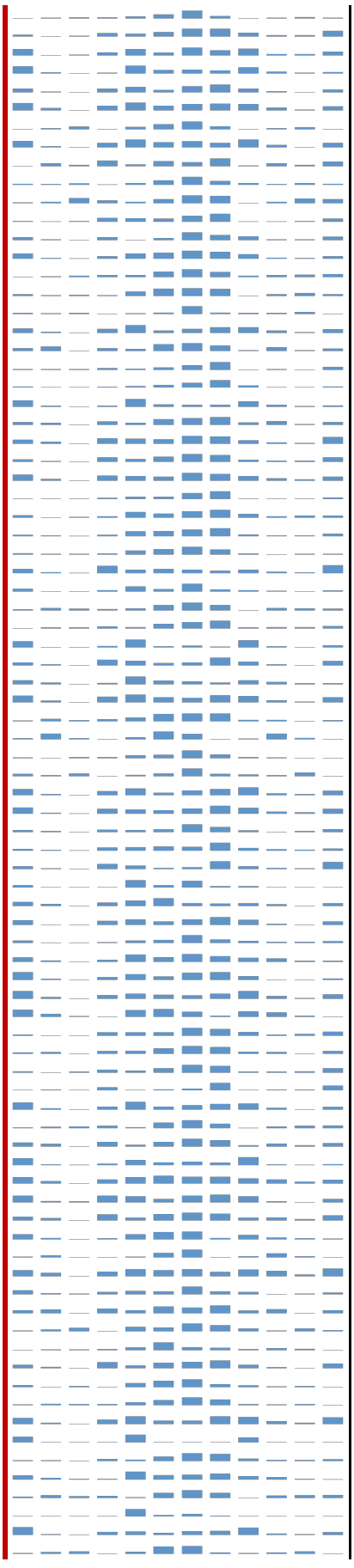
Cdk6	OSOM	4.60	6.37E-09	NS	
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Gjb3	OSOM	40.86	9.38E-09	NS	
Hyou1	ISOM	2.33	9.47E-09	NS	
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Csf3r	OSOM	23.95	1.14E-08	NS	
Alg8	OSOM	2.41	1.16E-08	NS	
Tacc2	OSOM	3.41	1.16E-08	NS	
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Large	OSOM	2.18	1.17E-08	NS	
Rnd3	OSOM	2.57	1.18E-08	NS	
Dap	OSOM	2.43	1.21E-08	NS	
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Sh3bp2	ISOM	4.74	1.39E-08	NS	
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Llgl1	OSOM	2.00	1.51E-08	NS	
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Adora1	OSOM	3.97	1.57E-08	NS	
Slfn4	OSOM	24.35	1.57E-08	NS	
Tifa	Cortex	3.27	1.58E-08	NS	
Ckap4	OSOM	2.95	1.59E-08	NS	
Atf3	OSOM	29.77	1.65E-08	NS	
Arrdc4	OSOM	3.37	1.65E-08	NS	
Panx1	OSOM	4.66	1.75E-08	NS	
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Igf2bp2	OSOM	5.83	1.8E-08	NS	
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Mal2	OSOM	2.86	1.87E-08	NS	
Ddit3	OSOM	2.96	1.89E-08	NS	
Ibtk	OSOM	2.13	1.91E-08	NS	
Ezh2	OSOM	3.05	1.94E-08	NS	
Limk1	OSOM	2.81	1.96E-08	NS	
Tirap	OSOM	2.95	1.97E-08	NS	
Spry2	OSOM	2.59	2E-08	NS	
Blcap	OSOM	2.05	2.02E-08	NS	
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Mchr1	OSOM	23.77	2.05E-08	NS	
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Pabpc4	OSOM	2.22	2.06E-08	NS	
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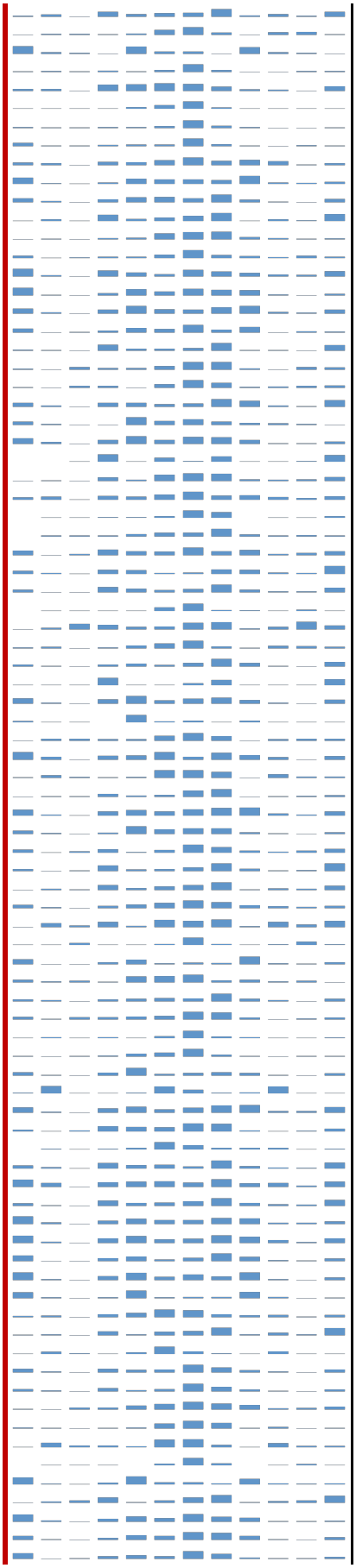
Hspb6	Cortex	3.18	2.11E-08	NS	
Pola1	OSOM	3.31	2.12E-08	NS	
S100a10	Cortex	3.54	2.17E-08	NS	
Srm	OSOM	2.58	2.18E-08	NS	
Ppp2r5b	OSOM	2.06	2.19E-08	NS	
Gja5	OSOM	2.79	2.2E-08	NS	
Vars	OSOM	2.38	2.27E-08	NS	
Pdia6	ISOM	2.02	2.35E-08	NS	
Gemin6	OSOM	2.41	2.39E-08	NS	
S100a8	OSOM	108.44	2.41E-08	NS	
2010109K11Rik	OSOM	3.20	2.59E-08	NS	
Nek6	Cortex	3.72	2.76E-08	NS	

Ccdc149	OSOM	2.57	2.85E-08	NS	
Mab21l3	OSOM	6.07	2.86E-08	NS	
Pak1	OSOM	2.24	2.86E-08	NS	
Brca1	OSOM	8.79	2.88E-08	NS	
Wisp1	OSOM	3.96	2.89E-08	NS	
Crlf1	OSOM	54.90	2.92E-08	NS	
Fignl1	OSOM	13.36	3.1E-08	NS	
Ccne1	OSOM	8.77	3.14E-08	NS	
1700017B05Rik	OSOM	2.23	3.15E-08	NS	
Jun	OSOM	4.38	3.16E-08	NS	
2610034B18Rik	OSOM	2.10	3.22E-08	NS	
Zdhhc13	OSOM	2.07	3.26E-08	NS	
Dusp4	OSOM	4.18	3.29E-08	NS	
Cars	OSOM	2.34	3.33E-08	NS	
Haus6	OSOM	2.76	3.37E-08	NS	
Nras	OSOM	2.29	3.4E-08	NS	
Col18a1	OSOM	2.82	3.48E-08	NS	
Actn1	OSOM	3.45	3.49E-08	NS	
Tspan8	OSOM	2.67	3.56E-08	NS	
Cttn	ISOM	2.09	3.6E-08	NS	
Gstcd	Cortex	2.75	3.71E-08	NS	
Lrrc20	OSOM	3.24	3.72E-08	NS	
6330406I15Rik	OSOM	12.26	4.04E-08	NS	
Mphosph6	OSOM	2.13	4.04E-08	NS	
D430041D05Rik	Cortex	201.92	4.08E-08	NS	
Iars	OSOM	2.19	4.11E-08	NS	
Rpp25	OSOM	8.85	4.15E-08	NS	
Gjb4	OSOM	47.18	4.16E-08	NS	
Pycr1	ISOM	7.33	4.18E-08	NS	
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Hap1	OSOM	2.70	4.54E-08	NS	
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Fst	OSOM	6.25	5.21E-08	NS	
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Frk	OSOM	2.55	5.56E-08	NS	
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D630045M09Rik	OSOM	3.76	5.71E-08	NS	
Tcof1	OSOM	2.24	5.94E-08	NS	
Ostc	OSOM	2.24	5.97E-08	NS	
Topbp1	OSOM	2.04	6.07E-08	NS	
Specc1	OSOM	2.14	6.16E-08	NS	
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Nolc1	OSOM	2.10	6.37E-08	NS	
Rab11fip5	OSOM	2.17	6.45E-08	NS	
Arg2	Cortex	3.91	6.6E-08	NS	
Ksr1	OSOM	3.07	6.67E-08	NS	
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Il13ra1	ISOM	2.29	6.96E-08	NS	
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Ch25h	Cortex	5.43	8.38E-08	NS	
Bdkrb2	OSOM	96.29	8.59E-08	NS	
Serpinb9	OSOM	2.40	8.61E-08	NS	
Cep78	OSOM	2.72	8.81E-08	NS	
Prkx	OSOM	2.80	8.99E-08	NS	
Cerkl	OSOM	10.73	9E-08	NS	
Unc13b	OSOM	2.33	9.13E-08	NS	
Camkk2	ISOM	2.06	9.7E-08	NS	
Itga5	OSOM	3.23	1.02E-07	NS	
Mcam	OSOM	2.49	1.05E-07	NS	
H6pd	OSOM	2.61	1.07E-07	NS	
Klrg2	OSOM	5.31	1.08E-07	NS	
Gsta1	Cortex	42.19	1.09E-07	NS	
Wdhd1	OSOM	5.08	1.12E-07	NS	
Asf1b	OSOM	7.70	1.13E-07	NS	
Uprt	Cortex	10.97	1.15E-07	NS	
Hk2	OSOM	17.59	1.21E-07	NS	
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Fut1	ISOM	53.67	1.23E-07	NS	
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St14	OSOM	2.13	1.31E-07	NS	
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Slc7a11	OSOM	12.59	1.34E-07	NS	
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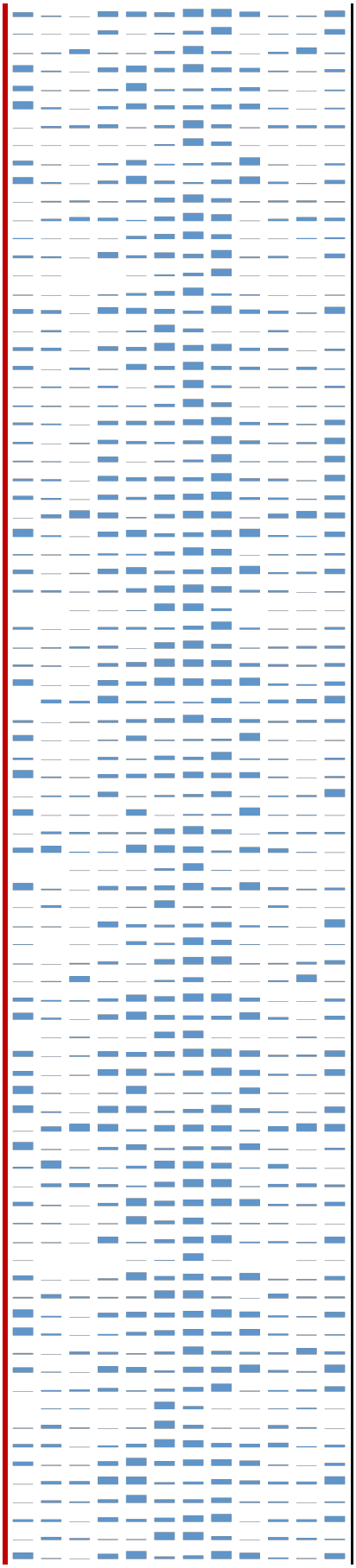
Slc35e4	OSOM	2.41	1.47E-07	NS	
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Slc39a14	ISOM	2.33	1.51E-07	NS	
Apobr	OSOM	3.34	1.54E-07	NS	
Ecscr	OSOM	2.84	1.58E-07	NS	
Rcn1	OSOM	2.77	1.6E-07	NS	
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Fut2	OSOM	92.48	1.64E-07	NS	
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Sh3bgrl2	OSOM	2.18	1.65E-07	NS	
Shq1	OSOM	2.26	1.67E-07	NS	
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Egr2	OSOM	38.53	1.79E-07	NS	
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Grp	ISOM	3067.67	1.82E-07	NS	
Rnd1	OSOM	7.21	1.83E-07	NS	
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Gc	OSOM	8.26	1.87E-07	NS	
Fjx1	OSOM	3.71	1.88E-07	NS	
Adamts1	Cortex	4.70	1.9E-07	NS	
Rrm2	OSOM	8.22	1.93E-07	NS	
Mybpc2	OSOM	11.70	1.95E-07	NS	
Mettl2	OSOM	2.07	1.96E-07	NS	
Fam38a	Cortex	2.59	1.97E-07	NS	
Efna5	OSOM	2.55	1.97E-07	NS	
Ptprj	OSOM	2.22	1.97E-07	NS	
Map3k2	OSOM	2.00	2.01E-07	NS	
Marveld3	Glom	2.77	2.02E-07	NS	
Mapk7	OSOM	2.34	2.06E-07	NS	
Tgif1	OSOM	4.20	2.08E-07	NS	
Sema6b	Cortex	3.03	2.12E-07	NS	
Smyd5	OSOM	2.64	2.13E-07	NS	
Sprr2f	Cortex	2862.73	2.16E-07	NS	
D730005E14Rik	OSOM	6.39	2.16E-07	NS	
Ipo7	Cortex	2.89	2.18E-07	NS	
Mapkapk2	Cortex	2.25	2.31E-07	NS	
Mospd2	Cortex	2.79	2.33E-07	NS	
Nxnl1	Glom	106.33	2.4E-07	NS	
Baz1a	OSOM	2.56	2.41E-07	NS	
Itpr3	OSOM	3.47	2.46E-07	NS	
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Mthfd1l	OSOM	4.36	2.57E-07	NS	
Paqr5	Glom	2.36	2.66E-07	NS	
Tyro3	ISOM	2.50	2.66E-07	NS	
Uchl4	OSOM	2.42	2.71E-07	NS	
Fkbp11	OSOM	5.30	2.71E-07	NS	
Il6	Cortex	468.98	2.73E-07	NS	
Spsb1	OSOM	5.22	2.75E-07	NS	
Hkdc1	OSOM	9.89	2.84E-07	NS	
Dclk1	OSOM	6.51	2.9E-07	NS	
Trem1	OSOM	47.02	2.9E-07	NS	
Ttc37	Cortex	2.73	2.97E-07	NS	
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Ugt1a9	Cortex	20.03	3.07E-07	NS	
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Mkl1	OSOM	2.18	3.24E-07	NS	
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Dapp1	OSOM	3.00	3.28E-07	NS	
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Vcl	OSOM	2.40	3.4E-07	NS	
Odc1	ISOM	2.50	3.49E-07	NS	
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Myd88	OSOM	2.24	3.54E-07	NS	
Mmp9	OSOM	18.54	3.56E-07	NS	
Fhdc1	OSOM	3.52	3.6E-07	NS	
Slc26a9	OSOM	368.73	3.63E-07	NS	
Rhbdf2	OSOM	2.51	3.65E-07	NS	
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Lzic	OSOM	2.10	3.79E-07	NS	
6330512M04Rik	OSOM	10.61	3.8E-07	NS	
Slc6a9	Cortex	2.39	4.05E-07	NS	
Ppp1r15a	OSOM	2.63	4.06E-07	NS	
Elf3	Glom	3.61	4.25E-07	NS	
Ugt1a10	Glom	397.97	4.28E-07	NS	
Gpt2	OSOM	2.63	4.32E-07	NS	
Nt5dc3	OSOM	2.80	4.35E-07	NS	
Slc15a3	OSOM	3.13	4.45E-07	NS	
5430427O19Rik	Glom	15.89	4.52E-07	NS	
G530011O06Rik	Glom	12.16	4.6E-07	NS	
Prim1	OSOM	2.56	4.6E-07	NS	
Mapk4	ISOM	4.57	4.66E-07	NS	
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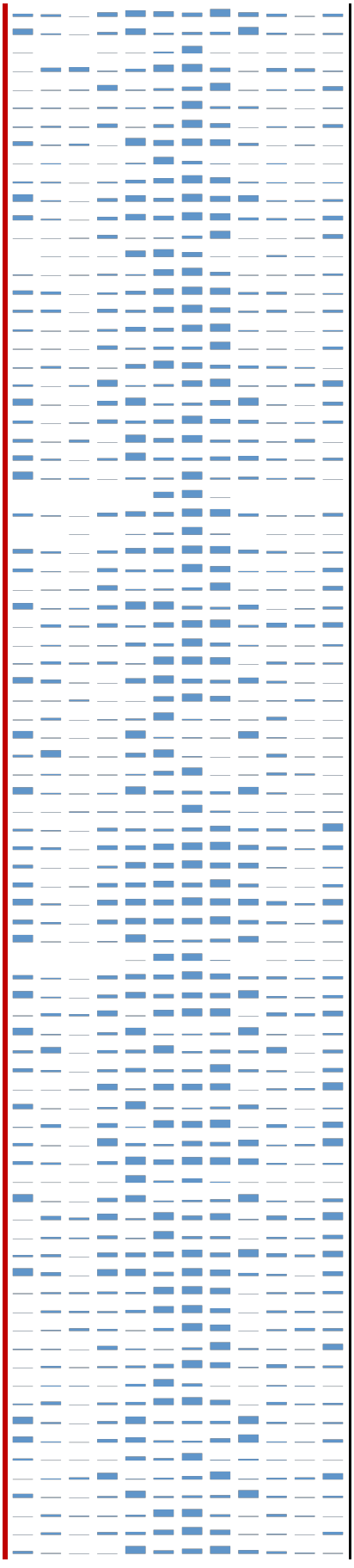
Nle1	OSOM	2.79	4.73E-07	NS	
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Ears2	ISOM	2.03	4.93E-07	NS	
Myo3b	OSOM	3.27	5.05E-07	NS	
Orc1	OSOM	8.59	5.13E-07	NS	
Ung	OSOM	4.95	5.14E-07	NS	
3110082I17Rik	ISOM	2.77	5.24E-07	NS	
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Ccdc86	OSOM	2.33	5.32E-07	NS	
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Wrb	OSOM	2.05	5.5E-07	NS	
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Map3k1	OSOM	2.77	6.09E-07	NS	
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Esyt1	OSOM	2.25	6.46E-07	NS	
Sec24d	OSOM	2.20	6.59E-07	NS	
Fgr	ISOM	5.88	6.61E-07	NS	
Gla	OSOM	2.25	7.02E-07	NS	
Tub	OSOM	16.72	7.06E-07	NS	
Crct1	OSOM	416.52	7.11E-07	NS	
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Ppan	OSOM	2.73	7.39E-07	NS	
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Icam1	Cortex	2.54	7.78E-07	NS	
Wasf1	OSOM	2.73	7.83E-07	NS	
Stil	OSOM	8.15	8.08E-07	NS	
Nln	OSOM	2.25	8.19E-07	NS	
Serpinb1a	ISOM	4.95	8.27E-07	NS	
Itga6	ISOM	4.92	8.39E-07	NS	
Aldh1a1	Cortex	3.10	8.4E-07	NS	
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Gm10845	Glom	108.06	8.6E-07	NS	
Trf	OSOM	7.08	8.7E-07	NS	
Pmepa1	OSOM	2.15	8.83E-07	NS	
9930005F22Rik	OSOM	7.07	8.94E-07	NS	
Bcl6	OSOM	3.11	9.47E-07	NS	
Dph2	OSOM	2.10	9.7E-07	NS	
Trp53	OSOM	2.32	9.85E-07	NS	
Erap1	Cortex	2.05	9.9E-07	NS	
Vps37b	OSOM	2.15	9.91E-07	NS	
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Serp2	OSOM	6.93	9.99E-07	NS	
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Me2	ISOM	2.01	1.14E-06	NS	
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Snhg5	OSOM	3.62	1.19E-06	NS	
Cxcr2	OSOM	87.56	1.23E-06	NS	
Samd4	OSOM	2.83	1.24E-06	NS	
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Gbe1	Cortex	2.33	1.27E-06	NS	
E030011O05Rik	OSOM	9.11	1.29E-06	NS	
Tipin	OSOM	2.34	1.32E-06	NS	
Adss	OSOM	2.08	1.33E-06	NS	
Mrps18b	Glom	2.34	1.34E-06	NS	
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2010003K11Rik	Glom	18.90	1.36E-06	NS	
1810029B16Rik	OSOM	2.70	1.38E-06	NS	
Sh3pxd2b	OSOM	2.94	1.38E-06	NS	
Ppp1r9b	OSOM	2.02	1.39E-06	NS	
Cd300lf	OSOM	71.88	1.4E-06	NS	
Grhl2	Glom	2.73	1.43E-06	NS	
Gm13889	OSOM	2.65	1.44E-06	NS	
Tgm2	OSOM	2.64	1.46E-06	NS	
Ccl2	OSOM	11.42	1.48E-06	NS	
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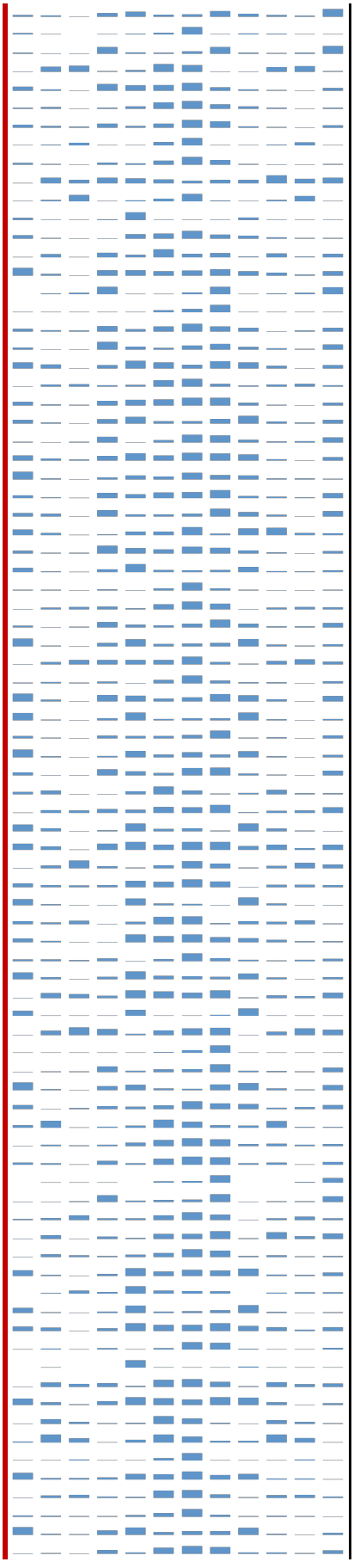
Fbxo2	OSOM	3.71	1.49E-06	NS	
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Gstm5	Glom	3.24	1.58E-06	NS	
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Ogg1	OSOM	2.11	1.62E-06	NS	
Lmnb1	OSOM	2.98	1.66E-06	NS	
1300002K09Rik	Glom	8.81	1.67E-06	NS	
Cdca7	OSOM	6.93	1.67E-06	NS	
4930579G22Rik	Glom	17.52	1.68E-06	NS	
Sntg2	Glom	17.92	1.72E-06	NS	
Fgfbp1	Glom	3.44	1.75E-06	NS	
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Akr1c13	OSOM	3.32	1.82E-06	NS	
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Fbxw17	OSOM	2.77	1.96E-06	NS	
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Psd4	OSOM	3.76	2.04E-06	NS	
Brsk1	OSOM	3.27	2.04E-06	NS	
Usp43	OSOM	2.30	2.05E-06	NS	
Pfn1	OSOM	2.03	2.09E-06	NS	
Zfp365	OSOM	17.36	2.1E-06	NS	
Ddx10	OSOM	2.02	2.13E-06	NS	
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Emilin1	OSOM	2.15	2.15E-06	NS	
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4930506M07Rik	Cortex	2.51	2.23E-06	NS	
Sh3bp4	OSOM	2.09	2.24E-06	NS	
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Dcbld1	Glom	2.02	2.28E-06	NS	
Chek1	OSOM	6.83	2.33E-06	NS	
Ap1s2	OSOM	2.12	2.34E-06	NS	
Elf4	OSOM	2.31	2.34E-06	NS	
Mex3a	OSOM	3.76	2.38E-06	NS	
Nrm	OSOM	3.17	2.48E-06	NS	
Cdc7	OSOM	4.20	2.5E-06	NS	
Pmaip1	OSOM	4.47	2.55E-06	NS	
Pafah1b3	Glom	2.80	2.56E-06	NS	
Tpm2	OSOM	3.19	2.69E-06	NS	
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B3gnt7	ISOM	2.22	2.72E-06	NS	
Rrp15	OSOM	2.01	2.73E-06	NS	
Adm	OSOM	3.66	2.73E-06	NS	
Ccdc21	Cortex	2.11	2.82E-06	NS	
Manf	OSOM	2.14	2.86E-06	NS	
Anln	OSOM	6.59	2.93E-06	NS	
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AU022252	Glom	2.02	2.94E-06	NS	
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Vgf	ISOM	805.18	3.04E-06	NS	
Gpr56	OSOM	2.10	3.09E-06	NS	
Atp8b1	OSOM	2.35	3.09E-06	NS	
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Nup43	OSOM	2.27	3.32E-06	NS	
Gm1631	ISOM	15.28	3.33E-06	NS	
Sytl2	Cortex	2.49	3.35E-06	NS	
Nhp2	ISOM	2.21	3.48E-06	NS	
Ethe1	ISOM	2.19	3.5E-06	NS	
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Dctd	OSOM	3.87	3.58E-06	NS	
Nt5c	OSOM	2.02	3.61E-06	NS	
Diap3	OSOM	10.68	3.61E-06	NS	
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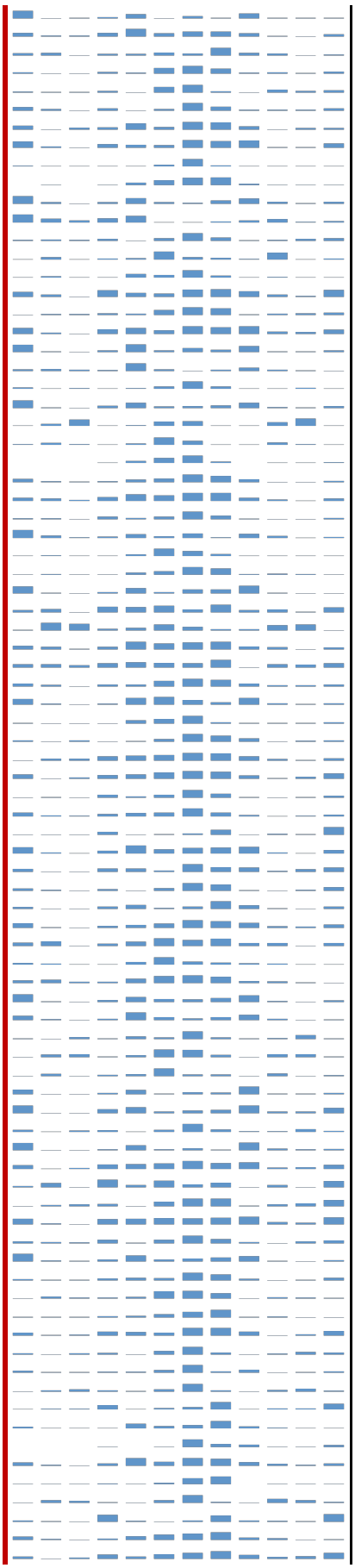
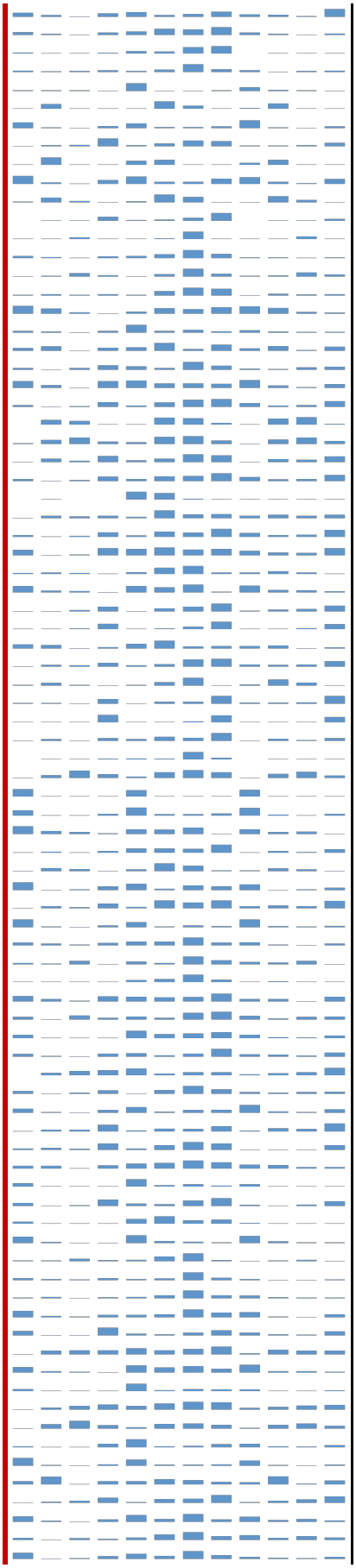
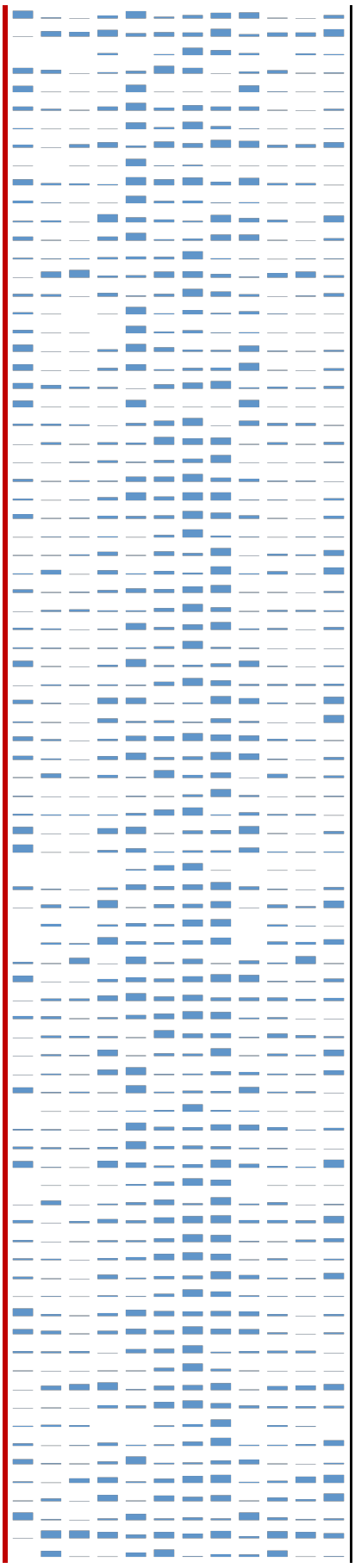
Egfr	OSOM	2.23	3.71E-06	NS	
Sh3bgrl3	OSOM	3.70	3.73E-06	NS	
Lgmn	OSOM	2.10	3.78E-06	NS	
BC048355	ISOM	2.84	3.84E-06	NS	
Eps8l3	OSOM	8.42	3.86E-06	NS	
E2f3	OSOM	2.42	3.9E-06	NS	
Txnrd1	Cortex	2.25	3.91E-06	NS	
Gins1	OSOM	4.02	3.91E-06	NS	
Fkbp10	OSOM	2.77	4.03E-06	NS	
Ftsjd1	OSOM	2.38	4.06E-06	NS	

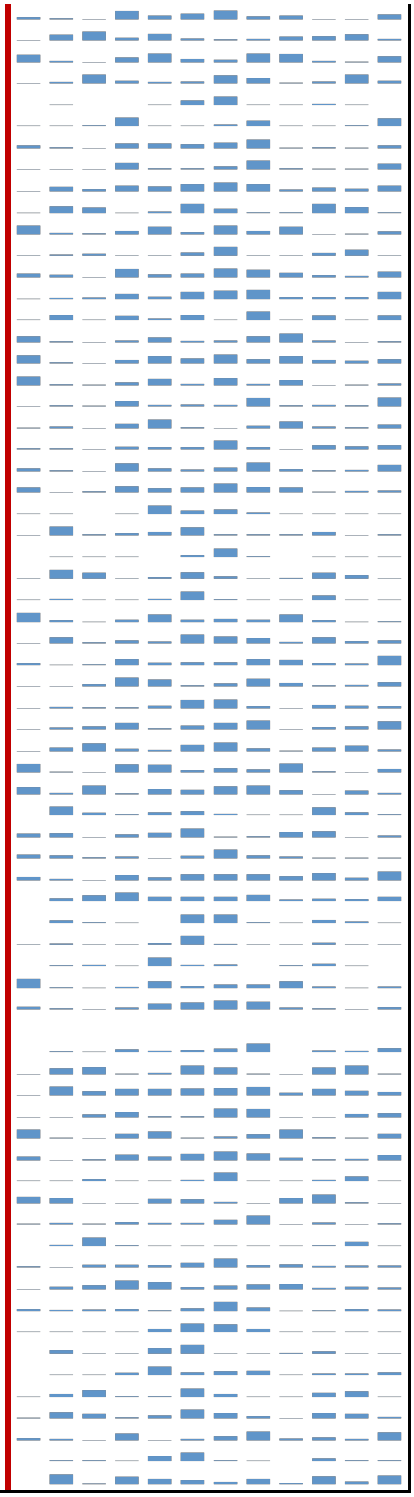
Rapgef4	OSOM	2.10	4.07E-06	NS	
Plek	OSOM	2.70	4.11E-06	NS	
Pdlim3	ISOM	3.80	4.15E-06	NS	
Creb5	OSOM	18.97	4.29E-06	NS	
Ypel2	OSOM	3.28	4.31E-06	NS	
Pla2g4c	OSOM	9.30	4.52E-06	NS	
S100a11	ISOM	2.35	4.57E-06	NS	
Incenp	OSOM	2.69	4.58E-06	NS	
Dtl	OSOM	16.56	4.73E-06	NS	
Btbd17	OSOM	252.53	4.84E-06	NS	
Sorbs2	OSOM	2.25	4.87E-06	NS	
A130049A11Rik	Glom	10.77	4.9E-06	NS	
Mms22l	OSOM	4.03	4.96E-06	NS	
Slc16a1	OSOM	5.12	4.96E-06	NS	
Slpi	OSOM	38.93	5.06E-06	NS	
Wdr76	OSOM	2.32	5.12E-06	NS	
Rrp12	OSOM	2.48	5.57E-06	NS	
Reep4	OSOM	2.03	5.62E-06	NS	
Actb	OSOM	2.27	5.63E-06	NS	
2900008C10Rik	Glom	6.01	5.67E-06	NS	
Lgi2	OSOM	11.59	5.81E-06	NS	
Cdr2l	OSOM	2.74	5.9E-06	NS	
Slc5a10	Glom	6.51	6.01E-06	NS	
Cftr	OSOM	5.05	6.02E-06	NS	
Tnfsf18	OSOM	309.22	6.07E-06	NS	
Sec1	OSOM	10.04	6.08E-06	NS	
Snrpd1	OSOM	2.03	6.1E-06	NS	
Hmga2-ps1	OSOM	6.07	6.17E-06	NS	
Lrrc10b	OSOM	6.09	6.26E-06	NS	
Sox9	OSOM	19.22	6.37E-06	NS	
Selp	OSOM	28.55	6.46E-06	NS	
Accn1	OSOM	10.46	6.47E-06	NS	
Cxcl16	OSOM	2.04	6.53E-06	NS	
Spsb4	Glom	2.13	6.61E-06	NS	
Mrpl52	OSOM	2.05	6.65E-06	NS	
Xlr3a	Glom	30.87	6.71E-06	NS	
Suv39h2	OSOM	2.81	6.82E-06	NS	
Cyr61	OSOM	5.41	6.95E-06	NS	
Acsbg1	OSOM	12.89	6.99E-06	NS	
Syt2	ISOM	17.53	7.25E-06	NS	
Wdr89	Glom	6.49	7.28E-06	NS	
Map3k14	Cortex	2.46	7.35E-06	NS	
Col5a3	OSOM	7.28	7.37E-06	NS	
Trip13	OSOM	6.86	7.39E-06	NS	
Slco4a1	OSOM	4.05	7.41E-06	NS	
Tuba1a	OSOM	2.60	7.49E-06	NS	
4930579G24Rik	OSOM	3.34	7.57E-06	NS	
4930427A07Rik	OSOM	5.21	7.66E-06	NS	
Slc16a3	OSOM	4.22	7.67E-06	NS	
Trib1	OSOM	4.35	7.72E-06	NS	
Adam11	OSOM	4.22	7.88E-06	NS	
Hpcal4	ISOM	12.48	7.88E-06	NS	
Shisa4	ISOM	3.40	7.97E-06	NS	
Birc3	Cortex	2.28	8.1E-06	NS	
Arl4c	OSOM	3.37	8.27E-06	NS	
Cp	Cortex	3.55	8.45E-06	NS	
Fth1	ISOM	2.26	8.51E-06	NS	
Mgst1	Cortex	2.93	8.56E-06	NS	
Sema7a	OSOM	2.94	8.63E-06	NS	
Rhob	OSOM	2.26	8.65E-06	NS	
Dbf4	OSOM	2.20	8.66E-06	NS	
Klf4	OSOM	2.34	8.7E-06	NS	
Spred1	OSOM	2.28	8.76E-06	NS	
Mum1l1	OSOM	2.91	8.86E-06	NS	
Mrs2	ISOM	2.12	8.87E-06	NS	
Zswim4	OSOM	2.05	8.92E-06	NS	
Dck	OSOM	2.64	9.04E-06	NS	
Ripk3	OSOM	3.29	9.28E-06	NS	
Pask	OSOM	3.60	9.34E-06	NS	
Apex1	ISOM	3.00	9.36E-06	NS	
Mt2	OSOM	11.39	9.42E-06	NS	
Smc2	OSOM	2.36	9.53E-06	NS	
Sec14l2	OSOM	2.65	9.59E-06	NS	
Ncaph	OSOM	5.28	1.01E-05	NS	
E130012A19Rik	OSOM	2.90	1.01E-05	NS	
Slc9a3	OSOM	2.77	1.02E-05	NS	
Hmga2	OSOM	25.70	1.04E-05	NS	
Pth2r	OSOM	106.10	1.05E-05	NS	
Dpep2	OSOM	6.30	1.05E-05	NS	
Prss22	OSOM	44.54	1.06E-05	NS	
E030010A14Rik	OSOM	3.31	1.06E-05	NS	
5430407P10Rik	OSOM	3.93	1.08E-05	NS	
Soat2	OSOM	20.24	1.12E-05	NS	
Tbl1x	Cortex	2.66	1.12E-05	NS	

Emilin2	OSOM	6.30	1.13E-05	NS
Ctxn1	OSOM	3.59	1.13E-05	NS
Ccl12	ISOM	11.75	1.15E-05	NS
Chaf1a	OSOM	3.74	1.18E-05	NS
Fez1	Glom	9.06	1.18E-05	NS
Slc16a14	OSOM	13.68	1.2E-05	NS
Fam129b	OSOM	2.17	1.21E-05	NS
Mcph1	OSOM	2.19	1.24E-05	NS
Anxa13	Glom	9.10	1.25E-05	NS
Cdon	OSOM	2.33	1.27E-05	NS
Abcb1b	OSOM	3.13	1.29E-05	NS
2310043J07Rik	OSOM	11.34	1.3E-05	NS
Ptpn5	OSOM	3.94	1.31E-05	NS
A630055G03Rik	OSOM	12.13	1.34E-05	NS
Abhd2	Cortex	2.95	1.34E-05	NS
Las1l	OSOM	2.85	1.35E-05	NS
Cyb5r2	ISOM	15.99	1.36E-05	NS
Cyp4f18	OSOM	4.52	1.36E-05	NS
Abcc4	OSOM	2.41	1.37E-05	NS
Chsy3	OSOM	3.44	1.37E-05	NS
Cdh2	OSOM	3.14	1.4E-05	NS
Nupl1	OSOM	2.19	1.4E-05	NS
Acot5	OSOM	88.04	1.43E-05	NS
Mpp6	Glom	2.21	1.46E-05	NS
Gm14137	OSOM	4.23	1.46E-05	NS
Mob1a	Cortex	2.94	1.48E-05	NS
Il1f6	Cortex	411.20	1.52E-05	NS
F630110N24Rik	Cortex	2.61	1.52E-05	NS
Vps13c	Cortex	2.84	1.53E-05	NS
Lysmd3	Cortex	2.37	1.53E-05	NS
Hmox1	OSOM	6.61	1.53E-05	NS
Tmcc3	OSOM	2.16	1.54E-05	NS
Syne2	Cortex	2.34	1.57E-05	NS
Scin	Glom	2.87	1.57E-05	NS
Snx10	OSOM	3.00	1.6E-05	NS
Tonsl	OSOM	2.95	1.61E-05	NS
Plin4	OSOM	6.48	1.64E-05	NS
Rgs6	OSOM	3.06	1.65E-05	NS
Bst1	OSOM	2.33	1.66E-05	NS
Gpr39	OSOM	5.19	1.66E-05	NS
S100a3	OSOM	47.81	1.67E-05	NS
Itgb6	Glom	2.95	1.74E-05	NS
Pi16	OSOM	3.32	1.75E-05	NS
Sema3f	OSOM	2.14	1.8E-05	NS
Ces2e	OSOM	2.85	1.8E-05	NS
Efcab5	ISOM	3.46	1.81E-05	NS
Pklr	Glom	6.08	1.81E-05	NS
Timeless	OSOM	2.37	1.84E-05	NS
Sesn3	OSOM	2.60	1.85E-05	NS
Plekhg2	OSOM	2.18	1.87E-05	NS
Mad2l1	OSOM	2.52	1.88E-05	NS
Bhlha15	ISOM	6.11	1.89E-05	NS
Gpbar1	OSOM	39.30	1.92E-05	NS
Zfp202	OSOM	2.38	2E-05	NS
D10Bwg1379e	ISOM	4.04	2.01E-05	NS
Fos	OSOM	29.29	2.1E-05	NS
Tnfsf9	OSOM	5.28	2.13E-05	NS
Catsper3	Glom	89.85	2.24E-05	NS
Ammecr1	OSOM	3.41	2.25E-05	NS
Tead4	OSOM	2.70	2.28E-05	NS
Fhod3	Glom	2.48	2.29E-05	NS
Sc4mol	OSOM	2.35	2.3E-05	NS
Gm11974	OSOM	3.83	2.31E-05	NS
Nfe2	OSOM	23.02	2.33E-05	NS
Tpbg	OSOM	2.86	2.35E-05	NS
Mmp7	Cortex	57.72	2.4E-05	NS
Itgb3	OSOM	3.99	2.52E-05	NS
Adora2b	Cortex	4.18	2.53E-05	NS
Rad51ap1	OSOM	7.47	2.53E-05	NS
Gtse1	OSOM	6.82	2.57E-05	NS
Chtf18	OSOM	5.03	2.6E-05	NS
Grhl1	OSOM	2.50	2.61E-05	NS
Gm20324	Glom	5.59	2.67E-05	NS
Lmna	OSOM	2.03	2.68E-05	NS
Pglyrp1	OSOM	4.93	2.74E-05	NS
2010002N04Rik	Glom	2.75	2.74E-05	NS
Osbpl3	Glom	2.01	2.75E-05	NS
Chi3l1	Glom	5.93	2.76E-05	NS
Ptger4	OSOM	2.20	2.77E-05	NS
A330021E22Rik	OSOM	2.62	2.8E-05	NS
Bicc1	Cortex	3.09	2.8E-05	NS
Ptpre	OSOM	2.78	2.81E-05	NS
Prkar2a	Cortex	2.13	2.82E-05	NS
Plk4	OSOM	2.36	2.83E-05	NS



Hes1	OSOM	2.13	2.85E-05	NS
Ccdc103	Glom	4.51	2.85E-05	NS
Snora3	Glom	77.44	2.9E-05	NS
Prr5l	OSOM	3.00	2.91E-05	NS
Arhgap28	OSOM	2.40	2.91E-05	NS
Itgb2	OSOM	2.47	2.91E-05	NS
Clec4d	OSOM	32.64	2.94E-05	NS
Naif1	Cortex	2.74	2.94E-05	NS
Retnlg	OSOM	112.35	2.95E-05	NS
Tagln2	OSOM	2.33	2.96E-05	NS
Pilra	OSOM	8.47	2.99E-05	NS
Prss23	Glom	2.03	3.03E-05	NS
Scx	OSOM	2.95	3.07E-05	NS
Gpr35	OSOM	4.30	3.08E-05	NS
Pex11c	Glom	2.38	3.14E-05	NS
Sgol2	OSOM	5.16	3.17E-05	NS
Clec4e	OSOM	164.31	3.19E-05	NS
1810033B17Rik	ISOM	37.96	3.2E-05	NS
Pir	Cortex	2.96	3.24E-05	NS
B3gnt3	OSOM	2.28	3.24E-05	NS
Slc25a43	ISOM	4.75	3.27E-05	NS
Hs3st6	OSOM	4.02	3.31E-05	NS
4833422C13Rik	OSOM	5.59	3.34E-05	NS
Ctsd	OSOM	2.23	3.35E-05	NS
Pgbd5	Cortex	6.31	3.4E-05	NS
Inhbb	Cortex	4.07	3.45E-05	NS
Ms4a6d	OSOM	5.73	3.47E-05	NS
BC055324	OSOM	3.32	3.48E-05	NS
Rad51	OSOM	7.02	3.58E-05	NS
Deptor	Cortex	4.60	3.61E-05	NS
Ociad2	OSOM	2.33	3.61E-05	NS
Msr1	OSOM	4.78	3.73E-05	NS
Dyrk3	ISOM	3.74	3.74E-05	NS
AA467197	OSOM	12.06	3.76E-05	NS
2810417H13Rik	OSOM	9.42	3.81E-05	NS
Grrp1	OSOM	2.87	3.86E-05	NS
Hmga1	OSOM	28.45	3.88E-05	NS
Epn3	OSOM	2.01	3.91E-05	NS
Tlr2	Cortex	2.81	3.94E-05	NS
Impdh2	OSOM	2.25	3.98E-05	NS
Ccdc109b	OSOM	3.41	4.06E-05	NS
Slc40a1	OSOM	2.51	4.08E-05	NS
Pcsk2	ISOM	29.82	4.1E-05	NS
Sqstm1	OSOM	2.09	4.19E-05	NS
Unc13d	OSOM	3.26	4.2E-05	NS
Nlgn2	OSOM	2.07	4.25E-05	NS
Pla2g2e	OSOM	157.11	4.27E-05	NS
Nol12	ISOM	2.00	4.29E-05	NS
Slc44a3	OSOM	2.02	4.33E-05	NS
Gpr84	OSOM	77.41	4.35E-05	NS
O3far1	Glom	75.52	4.36E-05	NS
Slc41a2	Glom	2.62	4.37E-05	NS
Plec	OSOM	2.66	4.37E-05	NS
Zfp575	Glom	89.66	4.38E-05	NS
Npm3	OSOM	2.11	4.43E-05	NS
Slc25a30	Cortex	2.57	4.62E-05	NS
Dmrt2	OSOM	2.17	4.7E-05	NS
4833417C18Rik	Glom	11.28	4.71E-05	NS
Stc2	ISOM	3.74	4.75E-05	NS
Exo1	OSOM	12.90	4.84E-05	NS
Sele	OSOM	13.05	4.93E-05	NS
Bcl2a1a	Glom	8.92	4.93E-05	NS
Slc22a15	OSOM	2.17	4.95E-05	NS
Mfi2	Glom	184.22	4.97E-05	NS
Guca2a	ISOM	6.50	4.98E-05	NS
Eif2c2	Cortex	2.65	4.99E-05	NS
Chac1	OSOM	9.05	5.03E-05	NS
Tsr1	OSOM	2.03	5.04E-05	NS
Mical3	OSOM	3.06	5.11E-05	NS
Sh2d5	OSOM	12.19	5.15E-05	NS
Pusl1	OSOM	2.07	5.16E-05	NS
Tcf19	OSOM	3.18	5.23E-05	NS
Cldn1	OSOM	3.21	5.25E-05	NS
Ptprn	OSOM	18.57	5.27E-05	NS
Mpzl2	Glom	2.10	5.29E-05	NS
Spata5l1	OSOM	2.39	5.32E-05	NS
Wnt7a	ISOM	80.50	5.38E-05	NS
Rbm11	ISOM	2.11	5.45E-05	NS
Tmem98	OSOM	2.03	5.51E-05	NS
Fem1c	Cortex	2.09	5.51E-05	NS
Tiam2	OSOM	2.10	5.51E-05	NS
Thbd	OSOM	2.05	5.53E-05	NS
Gm5918	Glom	2.00	5.56E-05	NS
1700034O15Rik	Glom	74.15	5.57E-05	NS



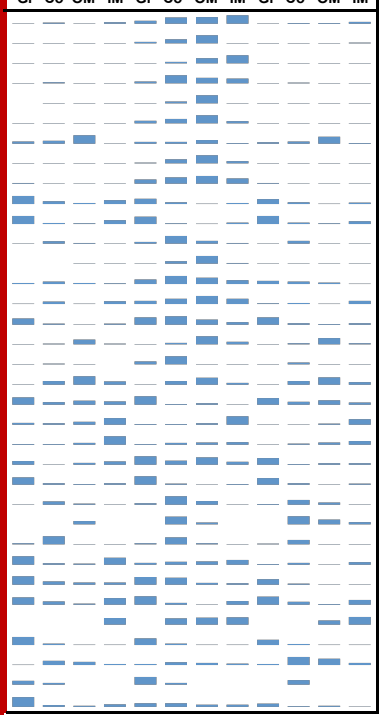
Col5a1	OSOM	2.55	5.58E-05	NS	
Gm711	Glom	18.98	5.59E-05	NS	
Capn5	OSOM	2.05	5.67E-05	NS	
Capg	Glom	2.32	5.68E-05	NS	
Serpina3m	OSOM	336.54	5.72E-05	NS	
Elfn1	Glom	6.88	5.73E-05	NS	
Cd276	OSOM	5.02	5.78E-05	NS	
Dsp	OSOM	2.21	5.78E-05	NS	
Rfc4	OSOM	2.56	5.88E-05	NS	
Slc19a1	Glom	2.16	5.89E-05	NS	
E2f7	OSOM	5.03	5.91E-05	NS	
Serpina1a	Glom	19.72	6.15E-05	NS	
Gpr77	OSOM	6.70	6.24E-05	NS	
Uba6	Cortex	2.49	6.3E-05	NS	
Slc1a2	Glom	12.12	6.3E-05	NS	
6230409E13Rik	ISOM	2.98	6.42E-05	NS	
Dusp6	OSOM	2.31	6.52E-05	NS	
Pole	OSOM	3.96	6.54E-05	NS	
1520402A15Rik	Glom	2.68	6.54E-05	NS	
Pcdhga2	Glom	8.84	6.67E-05	NS	
Fam54a	OSOM	7.05	6.7E-05	NS	
Ccdc112	OSOM	2.04	6.75E-05	NS	
Pdgfa	OSOM	2.18	6.9E-05	NS	
Il1f9	OSOM	113.15	6.91E-05	NS	
Ubxn10	Glom	7.15	6.92E-05	NS	
Krt12	OSOM	23.12	7.09E-05	NS	
Ube2u	Glom	5.22	7.1E-05	NS	
Cyp4a12b	OSOM	16.16	7.13E-05	NS	
Phlda3	OSOM	2.26	7.13E-05	NS	
Hcn3	Glom	8.44	7.16E-05	NS	
Rassf8	Cortex	3.16	7.16E-05	NS	
Cd109	Glom	3.49	7.31E-05	NS	
Mmp3	OSOM	7.13	7.53E-05	NS	
Met	Glom	2.25	7.53E-05	NS	
Slc5a1	Glom	2.38	7.54E-05	NS	
S1pr2	OSOM	2.09	7.67E-05	NS	
D030028A08Rik	ISOM	3.52	7.85E-05	NS	
Tpte	Glom	58.23	7.94E-05	NS	
Acsf2	Cortex	2.21	7.96E-05	NS	
Cdca8	OSOM	3.81	8.01E-05	NS	
Gpr176	OSOM	4.02	8.03E-05	NS	
Tlr9	Glom	68.60	8.12E-05	NS	
2810459M11Rik	OSOM	8.83	8.18E-05	NS	
Lpo	Glom	34.61	8.36E-05	NS	
Foxd3	Glom	130.05	8.41E-05	NS	
Itga2	OSOM	7.81	8.81E-05	NS	
Zfp593	OSOM	2.32	8.9E-05	NS	
Mir3091	OSOM	12.80	8.94E-05	NS	
Lypd3	OSOM	6.09	8.97E-05	NS	
Cldn2	Glom	2.90	8.97E-05	NS	
Syce2	Glom	2.74	8.97E-05	NS	
Csf2rb2	Glom	4.39	9.06E-05	NS	
C630004H02Rik	OSOM	2.24	9.12E-05	NS	
Usp9x	Cortex	2.46	9.2E-05	NS	
Serpina1b	OSOM	12.45	9.21E-05	NS	
Cyp4b1	OSOM	2.66	9.25E-05	NS	
Fcrls	OSOM	5.04	9.35E-05	NS	
H28	Glom	54.39	9.35E-05	NS	
Dpysl3	Cortex	4.19	9.42E-05	NS	
Zcchc12	Glom	6.92	9.47E-05	NS	
4632434I11Rik	OSOM	3.58	9.56E-05	NS	
Cxcl17	OSOM	19.24	9.56E-05	NS	
Creb3l3	Glom	229.75	9.58E-05	NS	
Cacng1	Glom	90.76	9.59E-05	NS	
C1ql3	Glom	66.72	9.72E-05	NS	
Dbi	Glom	2.58	9.78E-05	NS	
Xk	OSOM	3.34	9.82E-05	NS	
5430425J12Rik	Glom	166.90	9.94E-05	NS	
Ascl4	Glom	59.33	9.95E-05	NS	

Supplemental Table 1B

GENE	iAKI - ISCHEMIA REPERFUSION			vAKI - VOLUME DEPLETION			EXPRESSION PATTERN (FPKM)											
	Region with Most Significant Fold Change	Fold Change	P-value	Region with Most Significant Fold Change	Fold Change	P-Value	Control				Ischemia				Volume Depletion			
							GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Tuba4a			NS	ISOM	3.45	1.60E-24												
Stc1			NS	Cortex	10.72	9.35E-15												
Impa1			NS	ISOM	2.19	1.03E-13												
Ip6k2			NS	Cortex	2.11	2.60E-13												
Ddit4l			NS	Cortex	3.57	7.45E-13												
Sec14l1			NS	OSOM	2.60	2.51E-12												
Ccdc3			NS	ISOM	7.23	1.76E-11												
Tfdp2			NS	ISOM	2.37	2.4E-10												
Rnf19b			NS	ISOM	2.09	4.92E-10												
Shb			NS	ISOM	2.19	8.03E-10												
Pfkp			NS	ISOM	2.14	1.54E-09												
Mthfr			NS	OSOM	2.52	3.14E-09												
Fam84a			NS	OSOM	2.24	4.23E-09												
Slc45a3			NS	ISOM	2.86	4.73E-09												
Mfsd7b			NS	ISOM	2.25	4.98E-09												
Pappa2			NS	Cortex	6.35	1.09E-08												
Kctd10			NS	Glom	2.21	1.16E-08												
Arrdc3			NS	OSOM	2.70	4.9E-08												
Slc25a48			NS	ISOM	4.14	5.06E-08												
Cxcr4			NS	Cortex	2.91	5.87E-08												
Cdk18			NS	ISOM	2.10	6.14E-08												
Cidea			NS	Cortex	25.62	7.07E-08												
Cxcl13			NS	ISOM	15.47	7.21E-08												
Suox			NS	ISOM	2.20	7.28E-08												
Lpin2			NS	ISOM	2.41	9.05E-08												
Gem			NS	Cortex	6.10	9.65E-08												
Camk1d			NS	ISOM	2.71	1.28E-07												
Kiss1			NS	Glom	13.23	1.89E-07												
Rph3al			NS	Glom	3.05	2.66E-07												
Atp4a			NS	OSOM	3.80	3.1E-07												
Nr4a2			NS	ISOM	4.91	5.07E-07												
Rassf10			NS	ISOM	2.27	6.62E-07												
Ppp2r3a			NS	Cortex	2.03	8.63E-07												
Sesn2			NS	Glom	3.19	9.76E-07												
Mogat1			NS	ISOM	8.96	9.84E-07												
A230056P14Rik			NS	Glom	4.12	1.08E-06												
Gm6194			NS	Glom	3.56	1.12E-06												
Klhl29			NS	OSOM	3.69	1.23E-06												
Slc14a1			NS	Cortex	4.63	1.34E-06												
Luzp2			NS	ISOM	6.19	1.38E-06												
Pgap1			NS	ISOM	2.15	1.41E-06												
F13b			NS	ISOM	8.33	1.92E-06												
Rasal1			NS	OSOM	3.87	2.05E-06												
Aqp2			NS	Glom	7.22	2.1E-06												
Zfp286			NS	OSOM	3.77	2.21E-06												
Zfp185			NS	OSOM	2.09	2.49E-06												
Nlgn1			NS	Glom	128.41	2.49E-06												
Slc4a7			NS	ISOM	2.09	2.57E-06												
Ppp4r4			NS	OSOM	2.07	2.58E-06												
Nup62cl			NS	Glom	123.84	2.6E-06												
Enpp2			NS	OSOM	3.28	2.75E-06												
Ccrn4l			NS	Cortex	2.91	3.18E-06												
Apod			NS	Cortex	6.51	3.41E-06												
Rnf182			NS	Glom	127.70	4.06E-06												
Nostrin			NS	Cortex	2.06	4.15E-06												
Nxph3			NS	ISOM	3.04	4.29E-06												
Nek11			NS	Glom	80.38	4.38E-06												
Unc13c			NS	Glom	95.67	4.88E-06												
9530026P05Rik			NS	Cortex	3.25	5.06E-06												
Clcnka			NS	ISOM	2.26	5.4E-06												
E030013I19Rik			NS	ISOM	6.08	5.61E-06												
Csmd1			NS	Glom	8.46	7.2E-06												
Nfil3			NS	ISOM	5.00	7.22E-06												
Ldoc1l			NS	OSOM	2.82	7.25E-06												
Usp53			NS	Cortex	2.02	7.54E-06												
Shbg			NS	OSOM	5.15	7.59E-06												
Dab1			NS	OSOM	2.55	7.81E-06												
Cited4			NS	ISOM	3.34	9.24E-06												
Trim9			NS	OSOM	14.79	9.43E-06												
Sema4c			NS	Cortex	2.27	1E-05												
Acsm2			NS	ISOM	7.44	1.02E-05												
B230312C02Rik			NS	ISOM	14.51	1.03E-05												
Gpr98			NS	OSOM	5.29	1.03E-05												
2010107G23Rik			NS	Glom	2.73	1.11E-05												
Ednrb			NS	Cortex	2.37	1.14E-05												
Hpd			NS	ISOM	10.97	1.25E-05												
Mapk10			NS	OSOM	3.78	1.31E-05												
Rdh18-ps			NS	ISOM	3.37	1.51E-05												
Peg3			NS	Cortex	3.13	1.65E-05												
Espnl			NS	OSOM	3.49	1.71E-05												
Cpne5			NS	OSOM	6.45	1.93E-05												
Folh1			NS	ISOM	7.09	1.96E-05												
2210408F21Rik			NS	ISOM	2.94	2.09E-05												
Nptx1			NS	ISOM	9.40	2.38E-05												
Plcxd1			NS	OSOM	2.58	2.45E-05												
Arrdc2			NS	ISOM	2.04	2.5E-05												
Spp2			NS	ISOM	7.77	2.83E-05												
Arhgef37			NS	ISOM	2.87	2.91E-05												
Nxph4			NS	Glom	81.30	2.95E-05												
Slc22a6			NS	ISOM	6.25	2.97E-05												
Gas7			NS	Cortex	2.05	3.06E-05												
Gm1332			NS	ISOM	8.44	3.08E-05												
Ucp1			NS	Cortex	31.77	3.27E-05												
Hist1h2bb			NS	ISOM	5.47	3.48E-05												
Etnk2			NS	ISOM	2.03	3.58E-05												
Abca1			NS	Cortex	2.16	5.01E-05												
Maml3			NS	Cortex	2.04	5.06E-05												
Tmem27			NS	ISOM	2.37	5.38E-05												
Cyp2d26			NS	ISOM	5.02	5.44E-05												
Igfbp5			NS	ISOM	2.34	5.94E-05												
Nrap			NS	ISOM	3.68	5.99E-05												
Acmsd			NS	ISOM	7.76	8.84E-05												
Gprc5b			NS	ISOM	2.26	9.65E-05												

Supplemental Table 2

Biomarker Acronym	GENE	iAKI - ISCHEMIA REPERFUSION			vAKI - VOLUME DEPLETION			EXPRESSION PATTERN (FPKM)											
		Region with Most Significant Fold Change	Fold Change	P-value	Region with Most Significant Fold Change	Fold Change	P-Value	Control				Ischemia				Volume Depletion			
								GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
OPN	**Spp1**	OSOM	49.50	3.44E-27			NS												
GRO-α	**Cxcl1**	OSOM	219.96	6.09E-26			NS												
NGAL	**Lcn2**	OSOM	214.29	6.10E-22			NS												
Clu	**Clu**	OSOM	32.67	1.24E-11			NS												
KIM-1	**Havcr1**	OSOM	536.63	3.54E-11			NS												
TIMP1	**Timp1**	OSOM	123.42	3.87E-11			NS												
NAG	**Naglu**	OSOM	0.50	6.68E-10			NS												
IL-1ra	**Il1rn**	OSOM	145.76	1.46E-09			NS												
LIF	**Lif**	OSOM	89.14	2.1E-09			NS												
β2M	**B2m**	ISOM	0.45	4.81E-09	ISOM	0.52	4.94E-08												
TIMP2	**Timp2**	ISOM	0.43	7.85E-09			NS												
αGST	**Gsta1**	Cortex	42.19	1.09E-07			NS												
IL-6	**Il6**	Cortex	468.98	2.73E-07			NS												
πGST	**Gstp1**	Cortex	2.16	6.10E-07			NS												
MCP-1	**Ccl2**	OSOM	11.42	1.48E-06			NS												
CYR61	**Cyr61**	OSOM	5.41	6.95E-06			NS												
NHE3	**Slc9a3**	OSOM	2.77	1.02E-05			NS												
L-FABP	**Fabp1**	Cortex	7.93	1.73E-05			NS												
Netrin-1	**Ntn1**	ISOM	0.59	0.000109			NS												
IGFBP-7	**Igfbp7**	OSOM	0.59	0.000286			NS												
TRAIL	**Tnfsf10**	OSOM	0.55	0.000322	OSOM	0.52	6.34E-06												
HGF	**Hgf**	ISOM	0.32	0.000383			NS												
Collagen IV-α	**Col4a1**	Cortex	2.05	0.000462			NS												
VEGF	**Vegfa**	OSOM	0.64	0.000765			NS												
Vanin-1	**Vnn1**	OSOM	2.94	0.001701			NS												
Fetuin A	**Ahsg**			NS			NS												
Albumin	**Alb**			NS			NS												
MIP1-α	**Ccl3**			NS			NS												
RANTES	**Ccl5**			NS			NS												
CysC	**Cst3**			NS			NS												
IL-10	**Il10**			NS			NS												
IL-18	**Il18**			NS			NS												
RBP	**Rbp4**			NS			NS												
TFF3	**Tff3**			NS			NS												
VCAM-1	**Vcam1**			NS			NS												



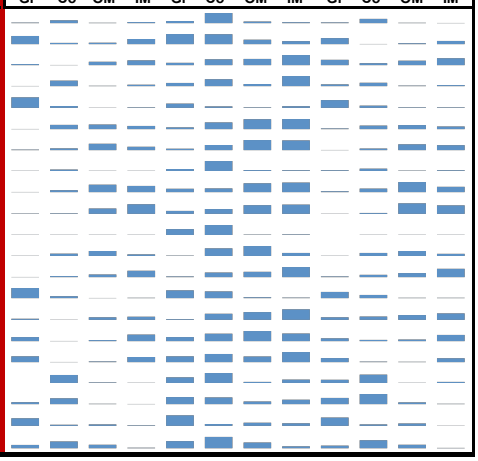
Supplemental Table 3A

SECRETED iAKI - ISCHEMIA REPERFUSION DIFFERENTIALLY EXPRESSED GENES ≥ 2 FOLD CHANGE									EXPRESSION PATTERN (FPKM)											
	Glomerulus		Cortex		Outer Medulla		Inner Medulla		Control				Ischemia				Volume Depletion			
GENE	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Plat		NS		NS	26.47	1.75E-36		NS												
Il34		NS	6.44	2.52E-22	9.51	5.61E-31	3.04	6.66E-10												
Rdh11		NS	2.55	1.95E-09	6.30	4.58E-30		NS												
Anxa3		NS	2.89	6.20E-08	10.57	2.88E-29		NS												
Pvr		NS	3.36	1.04E-10	9.16	6.64E-29	1.84	7.90E-04												
Spp1	15.43	2.09E-11	12.56	1.41E-14	49.50	3.44E-27	13.30	4.54E-15												
Lgals3	4.06	9.17E-07	3.78	9.44E-09	14.52	1.56E-26	2.91	3.05E-06												
Cxcl1		NS	34.04	2.33E-15	219.96	6.09E-26		NS												
Nop56		NS	2.22	6.85E-11	3.59	2.95E-25	1.50	6.48E-04												
Anxa2		NS	2.94	3.45E-07	9.54	1.42E-23		NS												
Plaur		NS	6.08	9.86E-11	19.74	1.65E-23		NS												
Cd14		NS	9.20	4.42E-16	15.97	8.42E-23		NS												
Lcn2	47.70	4.96E-10	196.50	2.52E-21	214.29	6.10E-22	95.81	6.01E-18												
Ngf		NS	2.15	8.12E-05	6.61	1.29E-20		NS												
Sfn		NS	6.24	2.00E-10	16.45	4.21E-20	5.00	1.23E-08												
Lrg1		NS	25.89	4.84E-14	68.88	4.54E-20	15.30	1.21E-10												
Gdf15		NS	12.46	4.84E-13	26.60	3.15E-19		NS												
Sdc4		NS		NS	3.61	5.16E-19		NS												
Slc3a2		NS		NS	3.80	6.33E-19	1.69	3.40E-04												
Gprc5a		NS	5.72	1.05E-09	13.31	1.73E-18		NS												
Litaf	2.46	6.00E-05	3.77	1.32E-12	4.97	2.84E-17		NS												
Defb1		NS		NS	5.79	2.51E-16	2.55	5.42E-06												
Vtcn1		NS	5.07	2.49E-06	20.54	3.07E-16	3.82	6.72E-05												
Rras2		NS	2.30	5.98E-06	4.56	8.49E-16		NS												
Cd9		NS	1.89	7.15E-06	3.19	9.96E-16		NS												
Ctsc		NS	2.53	1.90E-07	4.23	2.01E-15	2.22	5.63E-06												
Cd2ap		NS	1.96	1.06E-06	3.00	3.64E-15	1.91	2.65E-06												
Flnc		NS	6.44	6.62E-06	38.39	4.38E-15		NS												
Rtn4		NS	2.01	1.51E-04	4.44	4.69E-15		NS												
Tnfrsf12a		NS	11.87	2.46E-12	16.58	7.07E-15	6.16	8.10E-08												
Vat1		NS	3.09	2.10E-09	4.41	8.67E-15		NS												
Rap2b		NS	2.68	1.21E-05	6.07	9.91E-15		NS												
Cd24a		NS	3.22	2.16E-08	5.11	2.22E-14	2.68	1.94E-06												
Fga	64.48	1.88E-12	27.65	1.25E-13	30.54	3.27E-14	17.11	8.29E-11												
Lamc2		NS	2.43	1.37E-04	6.08	1.29E-13	2.46	1.01E-04												
Sphk1	3.47	9.53E-06	3.64	5.23E-09	5.15	1.42E-13		NS												
Hspb1		NS		NS	6.53	1.56E-13		NS												
Tnc		NS		NS	27.90	2.06E-13		NS												
Xbp1		NS	2.45	3.67E-08	3.32	2.98E-13		NS												
Tnfrsf1b		NS		NS	3.92	6.93E-13		NS												
Tmbim1		NS	1.70	1.77E-06	2.21	1.30E-12		NS												
Fgg	404.58	4.93E-11	57.98	2.02E-10	108.21	1.95E-12	32.98	2.00E-08												
Cpne8		NS	2.39	8.99E-07	3.52	2.00E-12		NS												
Smpdl3b		NS	7.34	2.31E-08	13.27	2.25E-12		NS												
Plscr1		NS	2.22	5.05E-07	3.06	2.58E-12	2.22	4.66E-07												
C3		NS	7.43	2.34E-08	13.62	2.68E-12		NS												
Msn		NS	2.32	9.83E-06	3.83	4.54E-12		NS												
Ier3		NS		NS	4.74	5.23E-12		NS												
Clcf1		NS	4.57	4.93E-06	10.74	8.38E-12		NS												
Clu		NS	6.20	7.47E-05	32.67	1.24E-11	22.52	5.27E-10												
Il11		NS	82.91	1.68E-08	256.12	2.22E-11	16.29	6.12E-05												
Chmp2b		NS	1.63	1.51E-06	1.97	2.24E-11		NS												
Tgfb1		NS	2.27	3.97E-06	3.31	2.30E-11		NS												
Tmsb10		NS		NS	5.64	3.23E-11		NS												
Serpina3n	13.53	1.90E-06	24.04	3.81E-12	20.11	3.75E-11	18.68	2.16E-10												
Timp1	36.20	1.28E-05	84.76	4.76E-10	123.42	3.87E-11	26.85	5.38E-07												
Rhoc		NS	2.32	2.45E-06	3.33	4.45E-11		NS												
Sprr1a	161.36	2.72E-10	39.15	3.37E-10	49.09	4.69E-11		NS												
Hbegf		NS	3.71	3.82E-06	6.80	5.09E-11		NS												
Mybbp1a		NS	1.98	6.73E-06	2.73	6.27E-11	1.79	1.20E-04												
Hsp90aa1		NS	1.82	4.49E-05	2.64	6.71E-11		NS												
Olfm4	4.52	8.49E-05		NS	6.64	7.44E-11	8.66	1.18E-13												
Ppp1r14b		NS	2.08	3.98E-04	3.96	1.02E-10	2.74	1.21E-06												
Cpe		NS		NS	3.70	1.07E-10		NS												
Plod3		NS	1.67	6.43E-05	2.30	1.12E-10		NS												
Tacstd2		NS	3.34	6.52E-08	4.26	1.53E-10	2.59	1.51E-05												
Nbl1		NS		NS	3.08	1.77E-10		NS												
Ran		NS	1.91	2.12E-06	2.39	1.98E-10	1.86	5.26E-06												
Cxcl2	271.13	2.16E-07	426.35	1.69E-11	74.85	2.44E-10	6.82	4.13E-04												
Sema3c	4.35	1.79E-10	3.26	2.74E-11	3.00	4.29E-10	2.20	6.22E-06												
Cd44		NS	3.52	1.90E-04	8.86	5.34E-10		NS												
Csf1		NS	2.16	2.37E-04	3.73	7.77E-10		NS												
S100a9		NS	46.81	3.78E-07	157.39	9.26E-10	25.99	7.54E-06												
Liph		NS		NS	6.30	1.07E-09		NS												
Pgd		NS	2.72	3.36E-10	2.63	1.24E-09	2.07	4.22E-06												
Cstb	2.00	1.30E-04	2.14	2.21E-07	2.45	1.39E-09	1.82	4.34E-05												
Il1rn	81.53	4.18E-05	71.54	6.59E-08	145.76	1.46E-09	14.78	1.14E-04												
Actg1		NS		NS	4.14	1.58E-09		NS												
Nrcam		NS	5.73	2.08E-07	6.78	1.73E-09		NS												
Gda		NS		NS	4.29	2.05E-09	2.92	6.89E-06												
Tgfbi		NS	2.21	5.67E-04	4.14	2.07E-09		NS												
Lif		NS	65.53	1.30E-08	89.14	2.10E-09	54.09	3.41E-08												

SECRETED iAKI - ISCHEMIA REPERFUSION DIFFERENTIALLY EXPRESSED GENES ≥ 2 FOLD CHANGE									EXPRESSION PATTERN (FPKM)											
	Glomerulus		Cortex		Outer Medulla		Inner Medulla		Control				Ischemia				Volume Depletion			
GENE	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	Gl	Co	OM	IM	Gl	Co	OM	IM	Gl	Co	OM	IM
1110007C09Rik		NS	1.78	2.34E-05	2.27	2.14E-09		NS												
Ywhag		NS	1.79	4.46E-05	2.35	2.59E-09		NS												
Serpine1		NS	6.28	8.34E-05	20.06	2.69E-09	5.05	4.30E-04												
Csda		NS		NS	2.56	2.71E-09		NS												
Fgb		NS	82.67	1.19E-05	1296.00	2.85E-09	59.31	6.47E-05												
Serpine2		NS		NS	2.22	3.91E-09		NS												
Mid1		NS		NS	3.79	5.79E-09	2.42	5.74E-05												
Cdh3		NS	2.75	6.98E-05	4.58	6.28E-09	2.92	2.06E-05												
S100a6		NS		NS	7.11	6.76E-09		NS												
Sdc1		NS	3.07	7.68E-06	4.31	8.45E-09	4.41	4.97E-09												
Kpnb1		NS	1.72	3.89E-05	2.14	8.67E-09		NS												
Anxa5		NS		NS	2.25	1.16E-08		NS												
Tfpi2		NS		NS	4.74	1.23E-08		NS												
Lmnb2		NS	2.08	7.86E-11	1.86	1.47E-08	1.98	1.90E-10												
Spry2		NS		NS	2.59	2.00E-08		NS												
S100a8		NS	35.53	4.14E-06	108.44	2.41E-08	41.41	3.45E-06												
Wisp1		NS	2.63	5.59E-05	3.96	2.89E-08		NS												
Crlf1	37.56	5.92E-05	10.81	2.12E-04	54.90	2.92E-08		NS												
Nras		NS	1.81	6.97E-05	2.29	3.40E-08		NS												
Col18a1		NS	1.94	3.33E-04	2.82	3.48E-08		NS												
Actn1		NS	2.38	9.34E-05	3.45	3.49E-08		NS												
6330406I15Rik		NS		NS	12.26	4.04E-08	10.75	2.61E-07												
Mmp19		NS		NS	8.46	4.97E-08		NS												
Fst		NS		NS	6.25	5.21E-08		NS												
Flot1		NS	2.86	3.39E-09	2.62	5.47E-08	1.98	9.51E-05												
Frk		NS	2.12	6.92E-06	2.55	5.56E-08		NS												
Tcof1		NS	1.66	6.20E-04	2.24	5.94E-08		NS												
Mcam		NS		NS	2.49	1.05E-07		NS												
H6pd		NS	2.30	3.88E-06	2.61	1.07E-07		NS												
Sprr2g	460.53	2.45E-06	411.58	2.43E-10	65.62	1.08E-07		NS												
Tnfrsf1a		NS	2.33	5.48E-09	2.14	1.30E-07		NS												
Rcn1		NS		NS	2.77	1.60E-07		NS												
Sh3bgrl2		NS		NS	2.18	1.65E-07		NS												
Rnd1		NS	5.31	8.77E-06	7.21	1.83E-07		NS												
Gc	7.29	5.71E-05		NS	8.26	1.87E-07	8.67	3.37E-07												
Efna5		NS		NS	2.55	1.97E-07		NS												
Ptprj		NS	1.69	5.63E-04	2.22	1.97E-07		NS												
Clic1		NS	1.89	1.03E-04	2.33	3.03E-07	1.84	2.05E-04												
Mkl1		NS	1.75	2.78E-04	2.18	3.24E-07		NS												
Vcl		NS		NS	2.40	3.40E-07		NS												
Mmp9		NS		NS	18.54	3.56E-07		NS												
Il6		NS	468.98	2.73E-07	130.42	3.89E-07		NS												
Chi3l3		NS	21.42	1.78E-05	44.70	4.38E-07	205.92	5.29E-08												
Flna		NS		NS	2.99	4.78E-07		NS												
Mfi2	184.22	4.97E-05	27.94	1.26E-05	50.83	5.17E-07	49.82	5.06E-07												
Map3k1		NS	2.51	5.82E-06	2.77	6.09E-07		NS												
Gla		NS		NS	2.25	7.02E-07		NS												
Trf		NS		NS	7.08	8.70E-07		NS												
Vps37b		NS		NS	2.15	9.91E-07		NS												
Glrx		NS		NS	2.19	1.13E-06		NS												
Pros1		NS	1.92	7.48E-06	2.03	1.18E-06		NS												
Ccl2		NS		NS	11.42	1.48E-06		NS												
Lmnb1		NS		NS	2.98	1.66E-06		NS												
Thbs1		NS		NS	2.55	1.93E-06		NS												
Grp		NS	176.72	9.81E-05	1636.75	1.99E-06	3067.67	1.82E-07												
Usp43		NS		NS	2.30	2.05E-06		NS												
Pfn1		NS		NS	2.03	2.09E-06		NS												
Emilin1		NS	2.02	1.36E-05	2.15	2.15E-06		NS												
Adm		NS		NS	3.66	2.73E-06		NS												
Manf		NS		NS	2.14	2.86E-06	2.02	1.58E-05												
Gpr56		NS	1.82	1.44E-04	2.10	3.09E-06		NS												
Nt5c		NS		NS	2.02	3.61E-06	1.88	2.72E-05												
Sh3bgrl3		NS		NS	3.70	3.73E-06		NS												
Lgmn	2.40	1.07E-05		NS	2.10	3.78E-06		NS												
Fkbp10		NS		NS	2.77	4.03E-06		NS												
Slpi		NS		NS	38.93	5.06E-06	13.32	6.57E-04												
Fgfbp1	3.44	1.75E-06		NS	0.36	5.34E-06	0.22	1.92E-11												
Actb		NS		NS	2.27	5.63E-06		NS												
Lgi2		NS		NS	11.59	5.81E-06		NS												
Accn1		NS		NS	10.46	6.47E-06		NS												
Gstp1	2.14	6.50E-05	2.16	6.10E-07	2.00	6.79E-06	1.98	1.03E-05												
Cyr61		NS	5.23	1.00E-05	5.41	6.95E-06		NS												
Col5a3		NS		NS	7.28	7.37E-06		NS												
Rhob		NS		NS	2.26	8.65E-06		NS												
S100a11		NS	2.04	1.22E-04	2.29	8.74E-06	2.35	4.57E-06												
Creld2		NS		NS	1.92	9.50E-06	1.98	3.84E-06												
Prss22		NS	22.02	3.80E-04	44.54	1.06E-05		NS												
Emilin2		NS		NS	6.30	1.13E-05		NS												
Ccl12		NS		NS	12.25	1.22E-05	11.75	1.15E-05												
Cdh2		NS		NS	3.14	1.40E-05		NS												
Bst1		NS		NS	2.33	1.66E-05		NS												
Pi16		NS		NS	3.32	1.75E-05		NS												

SECRETED iAKI - ISCHEMIA REPERFUSION DIFFERENTIALLY EXPRESSED GENES ≥ 2 FOLD CHANGE									EXPRESSION PATTERN (FPKM)											
	Glomerulus		Cortex		Outer Medulla		Inner Medulla		Control				Ischemia				Volume Depletion			
GENE	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Sema3f		NS		NS	2.14	1.80E-05		NS												
Ces2e		NS		NS	2.85	1.80E-05		NS												
Timeless		NS		NS	2.37	1.84E-05		NS												
Chtf18		NS		NS	5.03	2.60E-05		NS												
Lmna		NS		NS	2.03	2.68E-05	1.88	1.74E-04												
Pglyrp1		NS		NS	4.93	2.74E-05	4.20	1.18E-04												
Retnlg		NS	63.53	1.77E-04	112.35	2.95E-05		NS												
Tagln2		NS		NS	2.33	2.96E-05	2.11	2.19E-04												
Ctsd		NS	1.99	3.58E-04	2.23	3.35E-05	2.04	2.15E-04												
Vgf		NS	104.48	4.47E-04	280.09	3.61E-05	805.18	3.04E-06												
Npm3		NS		NS	2.11	4.43E-05	2.03	1.09E-04												
Mical3		NS		NS	3.06	5.11E-05		NS												
Birc3		NS	2.28	8.10E-06	2.11	5.17E-05		NS												
Ptprn		NS	11.28	6.05E-04	18.57	5.27E-05		NS												
Thbd		NS		NS	2.05	5.53E-05		NS												
Cp		NS	3.55	8.45E-06	3.12	5.53E-05		NS												
Capn5		NS		NS	2.05	5.67E-05		NS												
Serpina3m		NS		NS	336.54	5.72E-05		NS												
Cd276		NS		NS	5.02	5.78E-05		NS												
Dsp		NS		NS	2.21	5.78E-05		NS												
Pdgfa		NS		NS	2.18	6.90E-05		NS												
Il1f9		NS	90.28	1.66E-04	113.15	6.91E-05		NS												
Mmp3		NS		NS	7.13	7.53E-05		NS												
Lypd3		NS		NS	6.09	8.97E-05		NS												
Fcrls		NS		NS	5.04	9.35E-05	3.60	3.52E-04												
4632434I11Rik		NS		NS	3.58	9.56E-05		NS												
Cxcl17		NS	15.39	1.74E-04	19.24	9.56E-05	16.88	4.30E-04												
Ctsl		NS		NS	2.07	1.04E-04		NS												
Ccl9		NS	4.19	1.54E-04	4.65	1.13E-04		NS												
Nptx2		NS	35.64	2.93E-04	45.33	1.16E-04	22.21	2.08E-04												
Inhbb		NS	4.07	3.45E-05	3.61	1.17E-04	3.50	1.89E-04												
Procr		NS		NS	2.52	1.21E-04		NS												
Lamb3		NS		NS	5.30	1.36E-04		NS												
Bcam		NS		NS	1.83	1.71E-04		NS												
Crlf2		NS		NS	2.35	1.80E-04		NS												
Vcan		NS		NS	6.98	1.84E-04		NS												
Edn1		NS	2.59	3.88E-04	2.71	2.18E-04		NS												
1600029D21Rik		NS		NS	2.38	2.40E-04		NS												
Il24		NS		NS	216.63	2.41E-04		NS												
Il7		NS		NS	2.76	2.46E-04		NS												
Mmp7		NS	57.72	2.40E-05	30.33	2.56E-04		NS												
Lilrb4		NS		NS	3.70	2.60E-04		NS												
Myh9		NS		NS	2.32	3.18E-04		NS												
Il1f6	1859.02	7.06E-05	411.20	1.52E-05	176.92	3.62E-04	119.24	3.63E-04												
Gsr		NS		NS	1.62	3.75E-04	2.48	3.63E-11												
Adamts1		NS	4.70	1.90E-07	2.75	4.76E-04	3.22	6.02E-05												
S100a4		NS		NS	2.66	4.83E-04		NS												
Plac8		NS		NS	2.20	5.11E-04		NS												
Ret		NS		NS	4.87	6.49E-04		NS												
Cnpy4		NS		NS	1.46	9.01E-04		NS												
Pla2g5		NS		NS	2.23	1.02E-03		NS												
Ccl11		NS		NS	3.28	1.07E-03		NS												
Gm1045		NS		NS	7.71	1.14E-03		NS												
Il1r2		NS		NS	6.61	1.18E-03		NS												
Ppa1	1.86	1.76E-06	1.59	4.24E-06	1.38	1.24E-03	2.71	3.78E-22												
A2m		NS	5.50	5.58E-04	4.22	1.27E-03		NS												
Cttn		NS	1.70	7.48E-05	1.53	1.36E-03	2.09	3.60E-08												
Gm1673		NS		NS	5.54	1.52E-03		NS												
Clec5a		NS		NS	3.50	1.55E-03		NS												
Loxl2		NS		NS	2.11	1.55E-03		NS												
D17H6S56E-3		NS		NS	3.77	1.57E-03		NS												
Angptl6		NS		NS	2.44	1.68E-03	2.53	2.95E-04												
Sdf2l1		NS		NS	2.27	1.69E-03	3.58	1.48E-06												
Vnn1		NS		NS	2.94	1.70E-03		NS												
Hs3st1		NS		NS	1.97	1.76E-03		NS												
Pdia6		NS		NS	1.48	1.78E-03	2.02	2.35E-08												
E2f1		NS		NS	2.67	1.83E-03		NS												
Enpp6		NS		NS	3.24	1.87E-03		NS												
Vwf		NS		NS	2.04	1.91E-03		NS												
Pigr		NS		NS	2.44	2.00E-03		NS												
Col4a1		NS	2.05	4.62E-04	1.88	2.03E-03		NS												
Creb3l3	229.75	9.58E-05		NS		NS		NS												
Pklr	6.08	1.81E-05		NS		NS		NS												
Agt	5.96	3.01E-07		NS		NS		NS												
Chi3l1	5.93	2.76E-05		NS		NS		NS												
Dbi	2.58	9.78E-05		NS		NS		NS												
Fth1	2.40	9.96E-05	2.23	1.25E-05		NS	2.26	8.51E-06												
Capg	2.32	5.68E-05		NS		NS	1.87	1.89E-04												
Cd63	2.16	1.11E-04		NS		NS		NS												
Serpina7		NS	11.83	2.91E-04		NS		NS												
Prg4		NS	5.20	1.27E-04		NS		NS												
Dpysl3		NS	4.19	9.42E-05		NS		NS												

SECRETED iAKI - ISCHEMIA REPERFUSION DIFFERENTIALLY EXPRESSED GENES ≥ 2 FOLD CHANGE									EXPRESSION PATTERN (FPKM)											
	Glomerulus		Cortex		Outer Medulla		Inner Medulla		Control				Ischemia				Volume Depletion			
GENE	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	Fold Change	PValue	GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Aldh1a1		NS	3.10	8.40E-07		NS		NS												
Icam1		NS	2.54	7.78E-07		NS		NS												
Glg1		NS	2.29	2.46E-04		NS		NS												
Guca2a		NS		NS		NS	6.50	4.98E-05												
Calca		NS		NS		NS	3.20	2.19E-04												
Wfdc2		NS		NS		NS	2.46	3.51E-07												
Cyb561		NS	1.80	2.05E-05		NS	2.23	7.10E-09												
Lpo	34.61	8.36E-05	6.14	5.45E-04		NS		NS												
Ntf5	9.54	4.79E-08		NS		NS		NS												
Frzb	3.67	9.49E-06	4.47	4.25E-10		NS		NS												
Ccl20		NS	67.76	3.13E-04		NS		NS												
Mia2		NS	3.09	2.37E-04		NS		NS												
Bicc1		NS	3.09	2.80E-05		NS		NS												
Col8a1		NS	3.06	6.01E-04		NS		NS												
Ern1		NS	2.51	6.16E-04		NS		NS												
Usp9x		NS	2.46	9.20E-05		NS		NS												
Erap1		NS	2.05	9.90E-07		NS		NS												
1700034O15Rik	74.15	5.57E-05		NS		NS	16.05	6.19E-05												
Fetub		NS		NS		NS	4.19	7.51E-04												
Stc2		NS		NS		NS	3.74	4.75E-05												
2010204K13Rik		NS		NS		NS	2.49	3.89E-04												



Supplemental Table 3B

GENE	iAKI - ISCHEMIA REPERFUSION			vAKI - VOLUME DEPLETION			EXPRESSION PATTERN (FPKM)											
	Region with	Fold		Region with	Fold		Control				Ischemia				Volume Depletion			
	Most Significant Fold Change	Change	P-value	Most Significant Fold Change	Change	P-Value	GI	Co	OM	IM	GI	Co	OM	IM	GI	Co	OM	IM
Tuba4a			NS	ISOM	3.45	1.60E-24												
Stc1			NS	Cortex	10.72	9.35E-15												
Impa1			NS	ISOM	2.19	1.03E-13												
Ip6k2			NS	Cortex	2.11	2.60E-13												
Ddit4l			NS	Cortex	3.57	7.45E-13												
Sec14l1			NS	OSOM	2.60	2.51E-12												
Ccdc3			NS	ISOM	7.23	1.76E-11												
Tfdp2			NS	ISOM	2.37	2.4E-10												
Rnf19b			NS	ISOM	2.09	4.92E-10												
Shb			NS	ISOM	2.19	8.03E-10												
Pfkp			NS	ISOM	2.14	1.54E-09												
Mthfr			NS	OSOM	2.52	3.14E-09												
Fam84a			NS	OSOM	2.24	4.23E-09												
Slc45a3			NS	ISOM	2.86	4.73E-09												
Mfsd7b			NS	ISOM	2.25	4.98E-09												
Pappa2			NS	Cortex	6.35	1.09E-08												
Kctd10			NS	Glom	2.21	1.16E-08												
Arrdc3			NS	OSOM	2.70	4.9E-08												
Slc25a48			NS	ISOM	4.14	5.06E-08												
Cxcr4			NS	Cortex	2.91	5.87E-08												
Cdk18			NS	ISOM	2.10	6.14E-08												
Cidea			NS	Cortex	25.62	7.07E-08												
Cxcl13			NS	ISOM	15.47	7.21E-08												
Suox			NS	ISOM	2.20	7.28E-08												
Lpin2			NS	ISOM	2.41	9.05E-08												
Gem			NS	Cortex	6.10	9.65E-08												
Camk1d			NS	ISOM	2.71	1.28E-07												
Kiss1			NS	Glom	13.23	1.89E-07												
Rph3al			NS	Glom	3.05	2.66E-07												
Atp4a			NS	OSOM	3.80	3.1E-07												
Nr4a2			NS	ISOM	4.91	5.07E-07												
Rassf10			NS	ISOM	2.27	6.62E-07												
Ppp2r3a			NS	Cortex	2.03	8.63E-07												
Sesn2			NS	Glom	3.19	9.76E-07												
Mogat1			NS	ISOM	8.96	9.84E-07												
A230056P14Rik			NS	Glom	4.12	1.08E-06												
Gm6194			NS	Glom	3.56	1.12E-06												
Klhl29			NS	OSOM	3.69	1.23E-06												
Slc14a1			NS	Cortex	4.63	1.34E-06												
Luzp2			NS	ISOM	6.19	1.38E-06												
Pgap1			NS	ISOM	2.15	1.41E-06												
F13b			NS	ISOM	8.33	1.92E-06												
Rasal1			NS	OSOM	3.87	2.05E-06												
Aqp2			NS	Glom	7.22	2.1E-06												
Zfp286			NS	OSOM	3.77	2.21E-06												
Zfp185			NS	OSOM	2.09	2.49E-06												
Nlgn1			NS	Glom	128.41	2.49E-06												
Slc4a7			NS	ISOM	2.09	2.57E-06												
Ppp4r4			NS	OSOM	2.07	2.58E-06												
Nup62cl			NS	Glom	123.84	2.6E-06												
Enpp2			NS	OSOM	3.28	2.75E-06												
Ccrn4l			NS	Cortex	2.91	3.18E-06												
Apod			NS	Cortex	6.51	3.41E-06												
Rnf182			NS	Glom	127.70	4.06E-06												
Nostrin			NS	Cortex	2.06	4.15E-06												
Nxph3			NS	ISOM	3.04	4.29E-06												
Nek11			NS	Glom	80.38	4.38E-06												
Unc13c			NS	Glom	95.67	4.88E-06												
9530026P05Rik			NS	Cortex	3.25	5.06E-06												
Clcnka			NS	ISOM	2.26	5.4E-06												
E030013I19Rik			NS	ISOM	6.08	5.61E-06												
Csmd1			NS	Glom	8.46	7.2E-06												
Nfil3			NS	ISOM	5.00	7.22E-06												
Ldoc1l			NS	OSOM	2.82	7.25E-06												
Usp53			NS	Cortex	2.02	7.54E-06												
Shbg			NS	OSOM	5.15	7.59E-06												
Dab1			NS	OSOM	2.55	7.81E-06												
Cited4			NS	ISOM	3.34	9.24E-06												
Trim9			NS	OSOM	14.79	9.43E-06												
Sema4c			NS	Cortex	2.27	1E-05												
Acsm2			NS	ISOM	7.44	1.02E-05												
B230312C02Rik			NS	ISOM	14.51	1.03E-05												
Gpr98			NS	OSOM	5.29	1.03E-05												
2010107G23Rik			NS	Glom	2.73	1.11E-05												
Ednrb			NS	Cortex	2.37	1.14E-05												
Hpd			NS	ISOM	10.97	1.25E-05												
Mapk10			NS	OSOM	3.78	1.31E-05												
Rdh18-ps			NS	ISOM	3.37	1.51E-05												
Peg3			NS	Cortex	3.13	1.65E-05												
Espnl			NS	OSOM	3.49	1.71E-05												
Cpne5			NS	OSOM	6.45	1.93E-05												
Folh1			NS	ISOM	7.09	1.96E-05												
2210408F21Rik			NS	ISOM	2.94	2.09E-05												
Nptx1			NS	ISOM	9.40	2.38E-05												
Plcxd1			NS	OSOM	2.58	2.45E-05												
Arrdc2			NS	ISOM	2.04	2.5E-05												
Spp2			NS	ISOM	7.77	2.83E-05												
Arhgef37			NS	ISOM	2.87	2.91E-05												
Nxph4			NS	Glom	81.30	2.95E-05												
Slc22a6			NS	ISOM	6.25	2.97E-05												
Gas7			NS	Cortex	2.05	3.06E-05												
Gm1332			NS	ISOM	8.44	3.08E-05												
Ucp1			NS	Cortex	31.77	3.27E-05												
Hist1h2bb			NS	ISOM	5.47	3.48E-05												
Etnk2			NS	ISOM	2.03	3.58E-05												
Abca1			NS	Cortex	2.16	5.01E-05												
Maml3			NS	Cortex	2.04	5.06E-05												
Tmem27			NS	ISOM	2.37	5.38E-05												
Cyp2d26			NS	ISOM	5.02	5.44E-05												
Igfbp5			NS	ISOM	2.34	5.94E-05												
Nrap			NS	ISOM	3.68	5.99E-05												
Acmsd			NS	ISOM	7.76	8.84E-05												
Gprc5b			NS	ISOM	2.26	9.65E-05												

Supplemental Table 4

Gene	qPCR Primer Sequence	
Nphs1	Forward	5' – GTGTCCAAAGCCATCCAGTT – 3'
	Reverse	5' – GGCAACCTTTACATCTTGGG – 3'
Nphs2	Forward	5' – GCGAGGCACTTCGTGAAAC – 3'
	Reverse	5' – CACTTGCTCTCCCAGGAAC – 3'
Wt1	Forward	5' – ATCTGAAGACCCACACCAGG – 3'
	Reverse	5' – TTTCTGACAACTGTGCCACC – 3'
Synpo	Forward	5' – GCTCATTGACATGCAGCCTA– 3'
	Reverse	5' – TCATGGGGCTTTGCTCTATC – 3'
Slc5a2	Forward	5' – TGAGTGGAATGCGCTCTTCG – 3'
	Reverse	5' – CTTGCGGAGGTACTGAGGC – 3'
Alpl	Forward	5' – AACCCAGACACAAGCATTCC – 3'
	Reverse	5' – GCCTTTGAGGTTTTTGGTCA – 3'
Pck1	Forward	5' – AGCCTTTGGTCAACAACTGG – 3'
	Reverse	5' – GTTATGCCCAGGATCAGCAT – 3'
Lrp2	Forward	5' – TCTGGTGGAAATGTGATGGA – 3'
	Reverse	5' – ACACCGGTGATGTTCACAGA – 3'
Ggt1	Forward	5' – AAAAACGGGACGTCATTGAG – 3'
	Reverse	5' – CAGCCTCCTGGATGTCTTTC – 3'
Umod	Forward	5' – GAGATCCAGGTGAAGGCTTG – 3'
	Reverse	5' – TGCAGTAAGCCAGATTGCAC – 3'
Hoxb7	Forward	5' – ACCGAGTTCCTTCAACATGC – 3'
	Reverse	5' – GTCTGGTAGCGCGTGTAGGT – 3'
Aqp2	Forward	5' – CTGTGGAGCTCTTCCTGACC – 3'
	Reverse	5' – GGCTACCCAGGTTGTCACTG – 3'
Hsd11b2	Forward	5' – CTGCAGATGGATCTGACCAA – 3'
	Reverse	5' – GTCAGCTCAAGTGCACCAAA – 3'
Stc1	Forward	5' – ATCCTTCTTGTACAGTGCTGCTAA – 3'
	Reverse	5' – CGATGCTGCAAACGTTAAGCT – 3'
Pappa2	Forward	5' – CAGAGGGAGGACAGAGCAAC – 3'
	Reverse	5' – GGTCCAAACTGGTCACGACT – 3'
Enpp2	Forward	5' – TCTAGCATCCCAGAGCACCT – 3'
	Reverse	5' – CGTTTGAAGGCAGGGTACAT – 3'
Hpd	Forward	5' – CATTTCCACTCGGTGACCTT – 3'
	Reverse	5' – CTCGAATGCGATGTCTTTCA – 3'
Tuba4a	Forward	5' – AGTTCCAGACCAACCTGGTG – 3'
	Reverse	5' – TGACAGCTGCTCATGGTAGG – 3'
Impa1	Forward	5' – AAGGGAAAGGTGCCTTTTGT – 3'
	Reverse	5' – GCAGTGGATTCCCATCTCAT – 3'
Ddit4l	Forward	5' – CCCTGGGAGTCTGCTAAGTG – 3'
	Reverse	5' – GGTCAGTTTCTCAGGGACCA – 3'
Lcn2	Forward	5' – CTCAGAACTTGATCCCTGCC – 3'
	Reverse	5' – TCCTTGAGGCCCAGAGACTT – 3'
Havcr	Forward	5' – CATTTAGGCCTCATACTGC – 3'
	Reverse	5' – ACAAGCAGAAGATGGGCTT – 3'
Actb	Forward	5' – GGCTGTATTCCCCTCCATCG – 3'
	Reverse	5' – CCAGTTGGTAACAATGCCATGT – 3'