

**Table S1.** Significantly regulated genes of GO-Term GO:0007623 - circadian rhythm in aorta, heart and kidney after noise exposure (24h, 4d)

		Aorta - Control vs. 4 days noise		Heart - Control vs. 4 days noise		Kidney - Control vs. 4 days noise	
		lfcMLE	p-value adjusted	lfcMLE	p-value adjusted	lfcMLE	p-value adjusted
<i>Arntl</i>	aryl hydrocarbon receptor nuclear translocator-like	1.17	0.00051775	0.27	0.7165055	1.21	3.88E-26
<i>Cry1</i>	cryptochrome 1 (photolyase-like)	1.07	4.55E-07	0.57	0.05123406	1.15	9.56E-07
<i>Npas2</i>	neuronal PAS domain protein 2	0.95	0.00552347	-0.41	0.77480653	1.23	4.88E-10
<i>Id2</i>	inhibitor of DNA binding 2	0.63	4.71E-06	0.02	0.99075922	0.48	0.00011816
<i>Gpr157</i>	G protein-coupled receptor 157	0.43	0.01322795	0.28	0.75992755	-0.04	0.98461102
<i>Star</i>	steroidogenic acute regulatory protein	0.43	0.02949489	-0.17	0.9185866	-0.09	0.95074376
<i>Id4</i>	inhibitor of DNA binding 4	0.40	0.01957704	-1.16	0.70725432	0.31	0.80641999
<i>Pml</i>	promyelocytic leukemia	0.28	0.00475916	-0.08	0.94785857	0.04	0.95580073
<i>Cul3</i>	cullin 3	-0.18	0.03288531	0.08	0.93137358	0.00	0.99769682
<i>Rps27a</i>	ribosomal protein S27A	-0.20	0.03754223	0.30	0.71057801	-0.05	0.9262183
<i>Fmr1</i>	fragile X mental retardation syndrome 1	-0.23	0.02895276	-0.45	0.29900206	0.01	0.98687891
<i>Syncrin1</i>	synaptotagmin binding, cytoplasmic RNA interacting protein	-0.23	0.00479011	-0.16	0.82055999	0.04	0.94841419
<i>Atf5</i>	activating transcription factor 5	-0.28	0.04361746	-0.01	0.99234566	-0.20	0.78340179
<i>Relb</i>	avian reticuloendotheliosis viral (v-rel) oncogene related B	-0.28	0.03322863	-0.30	0.77138484	-0.22	0.77503961
<i>Nampt</i>	nicotinamide phosphoribosyltransferase	-0.37	0.00040244	0.17	0.84923089	-0.09	0.86306256
<i>Rora</i>	RAR-related orphan receptor alpha	-0.37	0.00778862	-0.28	0.70873644	0.00	0.99758185
<i>Creml</i>	cAMP responsive element modulator	-0.38	0.01878781	0.00	0.99863022	-0.03	0.96555616
<i>Fosl2</i>	fos-like antigen 2	-0.39	0.00404168	-0.89	2.03E-11	-0.31	0.66164095
<i>Cst3</i>	cystatin C	-0.40	0.0070909	0.27	0.78206151	-0.26	0.14392794
<i>Kdm5a</i>	lysine (K)-specific demethylase 5A	-0.46	2.69E-05	-0.12	0.9099024	-0.04	0.96064493
<i>Usp2</i>	ubiquitin specific peptidase 2	-0.54	0.00223347	-0.23	0.72796156	-0.62	4.66E-05
<i>Bhlhe40</i>	basic helix-loop-helix family, member e40	-0.67	0.00025125	-0.36	0.32837258	0.03	0.98003573
<i>Id1</i>	inhibitor of DNA binding 1	-0.67	0.00016262	0.32	0.83909762	0.14	0.90950898
<i>Bdnf</i>	brain derived neurotrophic factor	-0.72	2.25E-05	-0.08	0.94137351	-0.44	0.43114066

<i>Klf9</i>	Kruppel-like factor 9	-0.92	5.36E-11	-0.65	0.24028767	-0.48	0.1138832
<i>Jund</i>	jun D proto-oncogene	-1.06	3.59E-17	0.15	0.92249934	-0.63	0.06840794
<i>Serpine1</i>	serine (or cysteine) peptidase inhibitor, clade E, member 1	-1.16	8.70E-16	-1.07	0.22067185	-0.95	0.13324704
<i>Homer1</i>	homer scaffolding protein 1	-1.30	2.44E-14	0.04	0.97837598	-0.05	0.95074376
<i>Nr1d2</i>	nuclear receptor subfamily 1, group D, member 2	-1.48	1.88E-05	-0.81	0.00146314	-0.88	7.47E-15
<i>Nrip1</i>	nuclear receptor interacting protein 1	-1.61	0.00014643	-0.30	0.83471026	0.16	0.86326892
<i>Ciart</i>	circadian associated repressor of transcription	-1.74	2.71E-05	-0.22	0.91823531	-1.13	0.24569152
<i>Per1</i>	period circadian clock 1	-1.88	2.11E-31	-2.35	3.67E-13	-1.64	7.10E-09
<i>Dbp</i>	D site albumin promoter binding protein	-2.05	0.01964087	-1.21	0.03693016	-3.16	1.89E-54

**Table S2.** Significantly regulated genes of GO-Term GO:0006954 - inflammatory response in aorta, heart and kidney after noise exposure (24h, 4d)

		Aorta - Control vs. 4 days noise		Heart - Control vs. 4 days noise		Kidney - Control vs. 4 days noise	
		lfcMLE	p-value adjusted	lfcMLE	p-value adjusted	lfcMLE	p-value adjusted
<i>C3ar1</i>	complement component 3a receptor 1	-0.54	0.00244504	-0.34	0.69591567	-0.54	0.55513965
<i>Hdac7</i>	histone deacetylase 7	-0.35	2.62E-07	-0.08	0.95168013	-0.16	0.8124949
<i>Ndst1</i>	N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 1	-0.35	0.00311131	0.27	0.80192733	0.01	0.99487113
<i>F3</i>	coagulation factor III	-0.33	0.00436241	0.17	0.7459955	0.27	0.45869495
<i>Irak2</i>	interleukin-1 receptor-associated kinase 2	-0.27	0.02547748	0.42	0.53209847	-0.06	0.84595892
<i>Pxk</i>	PX domain containing serine/threonine kinase	-0.26	0.02938509	0.00	0.99732028	-0.02	0.96992394
<i>Ikkkb</i>	inhibitor of kappaB kinase beta	-0.25	0.02216162	-0.50	0.82437578	-0.04	0.9258147
<i>Acvr1</i>	activin A receptor, type 1	-0.25	0.00765311	0.13	0.87038	-0.10	0.91279746
<i>Lipa</i>	lysosomal acid lipase A	-0.24	0.00523168	0.00	0.99907399	-0.07	0.8694437
<i>Adam17</i>	a disintegrin and metallopeptidase domain 17	-0.23	0.04032625	-0.09	0.90829868	-0.15	0.48878624
<i>Nfe2l2</i>	nuclear factor, erythroid derived 2, like 2	0.21	0.01021042	0.13	0.82055999	-0.04	0.93874223
<i>Hspg2</i>	perlecan (heparan sulfate proteoglycan 2)	0.23	0.01055687	0.36	0.67646491	0.00	0.99697525
<i>Itgav</i>	integrin alpha V	0.23	0.01166671	0.37	0.64646563	0.01	0.98350481
<i>Rela</i>	v-rel reticuloendotheliosis viral oncogene homolog A (avian)	0.24	0.03082669	0.04	0.96617622	0.02	0.97667438
<i>Cx3cl1</i>	chemokine (C-X3-C motif) ligand 1	0.25	0.03766403	-0.18	0.78046423	0.00	0.99706639
<i>Relb</i>	avian reticuloendotheliosis viral (v-rel) oncogene related B	0.28	0.03322863	0.30	0.77138484	0.22	0.77503961
<i>Tgfb1</i>	transforming growth factor, beta 1	0.31	0.04075918	-0.19	0.87065632	0.18	0.84162201
<i>Hnrnpa0</i>	heterogeneous nuclear ribonucleoprotein A0	0.32	0.00219793	0.05	0.93452168	0.10	0.75568908
<i>Vcam1</i>	vascular cell adhesion molecule 1	0.32	0.00888199	0.12	0.89476221	-0.30	0.43167785
<i>Pik3cb</i>	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta	0.33	0.0171626	0.09	0.89229305	-0.03	0.96555616
<i>Notch1</i>	notch 1	0.41	0.02547748	0.20	0.71057801	-0.12	0.76769295
<i>Cd24a</i>	CD24a antigen	0.43	0.00239099	0.33	0.86188081	0.32	0.22863477
<i>Ncf1</i>	neutrophil cytosolic factor 1	0.43	0.0457203	0.44	0.62344647	-0.09	0.96383221

<i>Casp4</i>	caspase 4, apoptosis-related cysteine peptidase	0.45	0.02126494	0.55	0.67646491	0.39	0.77579689
<i>Gja1</i>	gap junction protein, alpha 1	0.51	6.91E-12	-0.24	0.72643569	0.44	0.71084764
<i>Ly75</i>	lymphocyte antigen 75	0.55	0.01237619	0.34	0.89922218	-0.06	0.97258762
<i>Bmp2</i>	bone morphogenetic protein 2	0.60	0.0009537	0.39	0.84855361	-0.11	0.95569157
<i>Ccl9</i>	chemokine (C-C motif) ligand 9	0.61	2.20E-05	0.45	0.2936026	0.40	0.75024266
<i>Pparg</i>	peroxisome proliferator activated receptor gamma	0.62	0.01866393	-0.16	0.88294743	1.16	0.6881325
<i>Mif</i>	macrophage migration inhibitory factor (glycosylation-inhibiting factor)	0.66	0.00012477	-0.34	0.76689156	0.29	0.55400949
<i>Tlr4</i>	toll-like receptor 4	0.75	2.96E-11	0.34	0.78279682	-0.12	0.95798562
<i>F8</i>	coagulation factor VIII	0.78	0.01898663	-0.17	0.9099024	-0.11	0.8652184
<i>Crlf2</i>	cytokine receptor-like factor 2	0.83	0.00039539	-0.21	0.90933366	0.53	0.64853411
<i>Tnfrsf21</i>	tumor necrosis factor receptor superfamily, member 21	1.02	1.14E-05	0.31	0.62560295	0.38	0.07198322
<i>Cebpb</i>	CCAAT/enhancer binding protein (C/EBP), beta	1.22	1.72E-07	0.74	0.53974004	0.47	0.31674745
<i>Ptgs2</i>	prostaglandin-endoperoxide synthase 2	1.26	0.00042112	0.86	0.70870442	0.90	0.66135485
<i>Cxcr4</i>	chemokine (C-X-C motif) receptor 4	1.33	0.00352778	-0.32	0.71380357	0.86	0.08558721
<i>Rel</i>	reticuloendotheliosis oncogene	1.34	0.02949489	-0.30	0.8472655	0.25	0.91283844

**Table S3.** Significantly regulated genes of GO-Term GO:0006979 – response to oxidative stress in aorta, heart and kidney after noise exposure (24h, 4d)

		Aorta - Control vs. 4 days noise		Heart - Control vs. 4 days noise		Kidney - Control vs. 4 days noise	
		lfcMLE	p-value adjusted	lfcMLE	p-value adjusted	lfcMLE	p-value adjusted
<i>Arntl</i>	aryl hydrocarbon receptor nuclear translocator-like	-1.17	0.00051775	-0.27	0.716505504	-1.21	3.88E-26
<i>Angptl7</i>	angiopoietin-like 7	-0.88	0.021259882	0.24	0.938467271	0.33	0.625952489
<i>Prkcd</i>	protein kinase C, delta	-0.53	2.13E-11	0.36	0.69514249	-0.07	0.807802929
<i>Pdgfrb</i>	platelet derived growth factor receptor, beta polypeptide	-0.49	1.95E-10	0.13	0.892293047	-0.40	0.222857547
<i>Star</i>	steroidogenic acute regulatory protein	-0.43	0.029494889	0.17	0.918586601	0.09	0.950743755
<i>Casp3</i>	caspase 3	-0.36	0.045087321	-0.01	0.996403845	0.01	0.993058405
<i>Stx2</i>	syntaxin 2	-0.35	0.000120277	-0.22	0.777695683	-0.07	0.930587747
<i>Mill2</i>	MHC I like leukocyte 2	-0.35	0.015030034	0.25	0.771384844	0.09	0.964400387
<i>Oxsr1</i>	oxidative-stress responsive 1	-0.33	8.44E-05	-0.12	0.852094584	-0.09	0.737918773
<i>Ankzf1</i>	ankyrin repeat and zinc finger domain containing 1	-0.28	0.036909163	0.14	0.854336317	-0.04	0.960644925
<i>Pml</i>	promyelocytic leukemia	-0.28	0.004759161	0.08	0.947858568	-0.04	0.95580073
<i>Hdac6</i>	histone deacetylase 6	-0.28	0.007319698	0.04	0.949773275	0.00	0.997696824
<i>Map3k5</i>	mitogen-activated protein kinase kinase kinase 5	-0.28	0.000884186	-0.15	0.860693423	-0.12	0.705611583
<i>Mapk9</i>	mitogen-activated protein kinase 9	-0.26	0.001213555	0.00	0.999073992	-0.10	0.629348975
<i>Parp1</i>	poly (ADP-ribose) polymerase family, member 1	-0.26	0.000657141	-0.10	0.894205931	-0.05	0.89855727
<i>Dapk1</i>	death associated protein kinase 1	-0.24	0.031419954	0.03	0.973013544	-0.17	0.625952489
<i>Stat6</i>	signal transducer and activator of transcription 6	-0.21	0.000947663	-0.05	0.92644222	-0.12	0.488786236
<i>Rcan2</i>	regulator of calcineurin 2	-0.19	0.041894116	-0.05	0.949422771	0.05	0.955200308
<i>Nfe2l2</i>	nuclear factor, erythroid derived 2, like 2	0.21	0.010210421	0.13	0.820559992	-0.04	0.938742233
<i>Plekha1</i>	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 1	0.21	0.032811914	0.22	0.707254315	-0.01	0.975060884
<i>Hspd1</i>	heat shock protein 1 (chaperonin)	0.23	0.042217971	-0.04	0.974670043	0.03	0.947546219
<i>Itgav</i>	integrin alpha V	0.23	0.011666714	0.37	0.646465633	0.01	0.983504806
<i>Rela</i>	v-rel reticuloendotheliosis viral oncogene homolog A (avian)	0.24	0.030826693	0.04	0.966176224	0.02	0.976674384

<i>Ndufb4</i>	NADH dehydrogenase (ubiquinone) 1 beta subcomplex 4	0.26	0.036756091	-0.30	0.701355486	0.27	0.076108243
<i>Cytc</i>	cytochrome c, somatic	0.27	0.041840317	-0.12	0.871695243	0.17	0.488786236
<i>Apex1</i>	apurinic/apurimidine endonuclease 1	0.30	0.043709969	-0.18	0.880994485	0.01	0.989363236
<i>Ndufa6</i>	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6 (B14)	0.30	0.024297325	-0.35	0.727421849	0.35	0.039700131
<i>Cpeb2</i>	cytoplasmic polyadenylation element binding protein 2	0.30	0.047688532	0.14	0.920128864	-0.18	0.639976901
<i>Bnip3</i>	BCL2/adenovirus E1B interacting protein 3	0.31	0.001581338	-0.17	0.836560605	0.21	0.010640264
<i>ApoE</i>	apolipoprotein E	0.32	0.015527214	0.13	0.938807115	-0.02	0.987612309
<i>Rhob</i>	ras homolog family member B	0.38	0.00026164	0.12	0.888862375	0.33	0.432383301
<i>Gpx1</i>	glutathione peroxidase 1	0.40	0.000530864	-0.17	0.895581497	0.22	0.384596127
<i>Cst3</i>	cystatin C	0.40	0.007090904	-0.27	0.782061505	0.26	0.143927941
<i>Gpx4</i>	glutathione peroxidase 4	0.43	0.000213441	-0.39	0.675178332	0.20	0.478414195
<i>Ncf1</i>	neutrophil cytosolic factor 1	0.43	0.045720298	0.44	0.623446468	-0.09	0.963832209
<i>Cd36</i>	CD36 molecule	0.50	0.015376477	-0.15	0.863170709	0.04	0.942798159
<i>Atp7a</i>	ATPase, Cu <sup>++</sup> transporting, alpha polypeptide	0.60	2.91E-08	0.47	0.425568609	-0.07	0.897271195
<i>Endog</i>	endonuclease G	0.63	0.007719158	-0.42	0.711220628	0.29	0.610280678
<i>Rcan1</i>	regulator of calcineurin 1	0.66	0.000450379	-0.21	0.841521926	0.46	0.320131842
<i>Plk3</i>	polo like kinase 3	0.70	0.004929014	0.51	0.682362901	1.77	0.039700131
<i>Ucp2</i>	uncoupling protein 2 (mitochondrial, proton carrier)	0.70	1.13E-09	0.47	0.755982833	0.45	0.142809224
<i>Net1</i>	neuroepithelial cell transforming gene 1	0.71	1.48E-07	0.54	0.62203586	-0.10	0.849693178
<i>Rom1</i>	reactive oxygen species modulator 1	0.93	1.31E-07	-0.50	0.737405532	0.47	0.274058266
<i>Klf2</i>	Kruppel-like factor 2 (lung)	1.09	0.002295291	0.21	0.895369891	0.42	0.415412859
<i>Trp53inp1</i>	transformation related protein 53 inducible nuclear protein 1	1.16	2.21E-20	0.71	0.154873494	-0.02	0.979567587
<i>Foxo3</i>	forkhead box O3	1.23	1.85E-08	0.01	0.993251854	0.55	0.391127064
<i>Ptgs2</i>	prostaglandin-endoperoxide synthase 2	1.26	0.000421116	0.86	0.70870442	0.90	0.661354847

**Table S4.** 50 most highly up regulated genes in brain after noise treatment (24h, 4d)

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Lrg1</i>	leucine-rich alpha-2-glycoprotein 1	1,50
<i>Alas2</i>	aminolevulinic acid synthase 2, erythroid	1,48
<i>Hbb-b2</i>	hemoglobin, beta adult minor chain	1,37
<i>Hbb-bs</i>	hemoglobin, beta adult s chain	1,15
<i>Xlr3a</i>	X-linked lymphocyte-regulated 3A	0,95
<i>Ctla2a</i>	cytotoxic T lymphocyte-associated protein 2 alpha	0,83
<i>Paqr5</i>	progesterin and adipoQ receptor family member V	0,80
<i>Edn1</i>	endothelin 1	0,77
<i>Ube2l6</i>	ubiquitin-conjugating enzyme E2L 6	0,76
<i>AK131586</i>	mitochondrially encoded cytochrome c oxidase II	0,76
<i>Rps15a-ps6</i>	ribosomal protein S15A, pseudogene 6	0,74
<i>Cd14</i>	CD14 antigen	0,73
<i>AK131579</i>	mitochondrially encoded cytochrome c oxidase III	0,72
<i>BC069931</i>	chr1:24,613,971-24,614,788 or chrM:7,790-8,607	0,72
<i>Rpl31-ps12</i>	ribosomal protein L31, pseudogene 1 2	0,72
<i>AK018753</i>	mitochondrially encoded NADH dehydrogenase 1	0,70
<i>Mgp</i>	matrix Gla protein	0,70
<i>Gm694</i>	steroid receptor associated and regulated protein	0,68
<i>Sult1a1</i>	sulfotransferase family 1A, phenol-preferring, member 1	0,68
<i>Ly6a</i>	lymphocyte antigen 6 complex, locus A	0,67
<i>AK163440</i>	NADH-ubiquinone oxidoreductase chain 2 (EC 1.6.5.3)	0,67
<i>DQ539915</i>	Cytochrome oxidase subunit 1 (EC 1.9.3.1)	0,65
<i>AU021092</i>	expressed sequence AU021092	0,64
<i>Ly6c1</i>	lymphocyte antigen 6 complex, locus C1	0,64

<i>AK142750</i>	mitochondrially encoded NADH dehydrogenase 4	0,63
<i>Eif4ebp1</i>	eukaryotic translation initiation factor 4E binding protein 1	0,63
<i>Vwf</i>	Von Willebrand factor	0,62
<i>Rpl37</i>	ribosomal protein L37	0,61
<i>Rps19</i>	ribosomal protein S19	0,61
<i>Rps14</i>	ribosomal protein S14	0,60
<i>Slc52a3</i>	solute carrier protein family 52, member 3	0,59
<i>Tmem176a</i>	transmembrane protein 176A	0,58
<i>X57780</i>	mitochondrially encoded cytochrome b	0,58
<i>Rps23</i>	ribosomal protein S23	0,57
<i>Rps28</i>	ribosomal protein S28	0,57
<i>Rpl26,Gm15772</i>	ribosomal protein L26	0,57
<i>Rps12,Snora33,Snord100</i>	ribosomal protein S12	0,57
<i>Rpl27</i>	ribosomal protein L27	0,56
<i>Agt</i>	angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	0,56
<i>Rpl30</i>	ribosomal protein L30	0,56
<i>Fth1</i>	ferritin heavy polypeptide 1	0,55
<i>Rpl35a</i>	ribosomal protein L35A	0,55
<i>Rps21</i>	ribosomal protein S21	0,55
<i>Rps20</i>	ribosomal protein S20	0,55
<i>Fbln1,AK206280</i>	fibulin 1	0,55
<i>Rps11</i>	ribosomal protein S11	0,54
<i>Rpl34</i>	ribosomal protein L34	0,54
<i>Rps4x</i>	ribosomal protein S4, X-linked	0,54
<i>Rpl37a</i>	ribosomal protein L37a	0,53
<i>Rps7</i>	ribosomal protein S7	0,53

**Table S5.** 50 most highly down regulated genes in brain after noise treatment (24h, 4d)

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Sacs</i>	sacsin	-1,42
4933409K07Rik <i>Gm3893</i>	RIKEN cDNA 4933409K07 gene	-1,35
<i>Dnah11</i>	dynein, axonemal, heavy chain 11	-1,12
<i>Lingo4</i>	leucine rich repeat and Ig domain containing 4	-1,10
<i>Ankfn1</i>	ankyrin-repeat and fibronectin type III domain containing 1	-1,07
<i>Gan</i>	giant axonal neuropathy	-1,07
D830031N03Rik	RIKEN cDNA D830031N03 gene	-1,05
<i>Glr1</i>	glycine receptor, alpha 1 subunit	-1,04
<i>Dgkh</i>	diacylglycerol kinase, eta	-1,02
<i>Tenm1</i>	teneurin transmembrane protein 1	-1,02
<i>Hipk2</i>	homeodomain interacting protein kinase 2	-1,02
<i>Gm340</i>	predicted gene 340	-1,02
<i>Dst</i>	dystonin	-1,00
<i>Rest</i>	RE1-silencing transcription factor	-0,98
<i>Gprin3</i>	GPRIN family member 3	-0,98
<i>Kcnh7</i>	potassium voltage-gated channel, subfamily H (eag-related), member 7	-0,95
<i>Ago3</i>	argonaute RISC catalytic subunit 3	-0,95
<i>Spn</i>	spn family transcription repressor	-0,93
<i>Grin2a,AK086290</i>	glutamate ionotropic receptor NMDA type subunit 2A	-0,93
<i>Macf1</i>	microtubule-actin crosslinking factor 1	-0,90
<i>Nbeal1,AK041465</i>	neurobeachin like 1	-0,89
<i>Fam135b</i>	family with sequence similarity 135, member B	-0,89
<i>Ksr2</i>	kinase suppressor of ras 2	-0,88
<i>AK171934,Aff2</i>	AF4/FMR2 family member 2	-0,87
<i>Mdn1</i>	midasin AAA ATPase 1	-0,86
<i>Nkain3</i>	Na <sup>+</sup> /K <sup>+</sup> transporting ATPase interacting 3	-0,85
<i>Slc6a5</i>	solute carrier family 6 (neurotransmitter transporter, glycine), member 5	-0,85

<i>Tcp11l1</i>	T-complex 11 Like 1	-0,84
<i>Tmem178b</i>	transmembrane protein 178B	-0,83
<i>Arfgef3</i>	ARFGEF family member 3	-0,83
<i>Hivep3,Krc</i>	human immunodeficiency virus type I enhancer binding protein 3	-0,83
<i>Zfp369</i>	zinc finger protein 369	-0,82
<i>D630041G03Rik</i>	RIKEN cDNA D630041G03 gene	-0,80
<i>Unc80</i>	unc-80, NALCN activator	-0,79
<i>Tnr</i>	tenascin R	-0,79
<i>Trip11,AK045549</i>	thyroid hormone receptor interactor 11	-0,78
<i>Xkr4,AK135172</i>	XK related 4	-0,77
<i>Sv2c</i>	synaptic vesicle glycoprotein 2c	-0,77
<i>AB352175</i>	chr9:27,351,045-27,351,072	-0,76
<i>Ptar1</i>	protein prenyltransferase alpha subunit repeat containing 1	-0,75
<i>Dok6</i>	docking protein 6	-0,74
<i>Cep350</i>	centrosomal protein 350	-0,74
<i>F5</i>	coagulation factor V	-0,74
<i>AK039686</i>	predicted gene 10010	-0,73
<i>Tenm4</i>	teneurin transmembrane protein 4	-0,72
<i>Lyst</i>	lysosomal trafficking regulator	-0,71
<i>Kcnq3</i>	potassium voltage-gated channel, subfamily Q, member 3	-0,70
<i>AK164996,Trpm3</i>	transient receptor potential cation channel subfamily M member 3	-0,69
<i>Plcx3</i>	phosphatidylinositol-specific phospholipase C, X domain containing 3	-0,69
<i>Cbl</i>	Casitas B-lineage lymphoma	-0,69

**Table S6.** 50 most highly up regulated genes after noise treatment during the sleep phase (12h, 4d)

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Atoh8</i>	atonal bHLH transcription factor 8	0.93
<i>Zfp703</i>	zinc finger protein 703	0.87
<i>Tmem229b</i>	transmembrane protein 229B	0.73
<i>Map3k6</i>	mitogen-activated protein kinase kinase kinase 6	0.87
<i>Ihh</i>	Indian hedgehog	0.90
<i>Dgkg</i>	diacylglycerol kinase, gamma	0.86
<i>Bmf</i>	BCL2 modifying factor	0.97
<i>Eef2k</i>	eukaryotic elongation factor-2 kinase	0.66
<i>Fkbp5</i>	FK506 binding protein 5	1.31
<i>Pip5k1b</i>	phosphatidylinositol-4-phosphate 5-kinase, type 1 beta	0.83
<i>Id2</i>	inhibitor of DNA binding 2	0.73
<i>Snai2</i>	snail family zinc finger 2	0.71
<i>2010300C02Rik</i>	RIKEN cDNA 2010300C02 gene	0.73
<i>Lpin3</i>	lipin 3	0.62
<i>Fam212b</i>	family with sequence similarity 212, member B	0.64
<i>Dock5</i>	dedicator of cytokinesis 5	0.64
<i>Irf2bpl</i>	interferon regulatory factor 2 binding protein-like	0.61
<i>5930403L14Rik</i>	RIKEN cDNA 5930403L14 gene	0.54
<i>Fbxo31</i>	F-box protein 31	0.58
<i>Socs1</i>	suppressor of cytokine signaling 1	0.83
<i>AK047676</i>	RIKEN cDNA C030009J22 gene	1.42
<i>Mt1</i>	metallothionein 1	0.62
<i>Hey1</i>	hairy/enhancer-of-split related with YRPW motif 1	0.72
<i>Mn1</i>	meningioma 1	0.69
<i>Mthfd2</i>	methylenetetrahydrofolate dehydrogenase (NAD <sup>+</sup> dependent), methenyltetrahydrofolate	0.62
<i>Mob2</i>	MOB kinase activator 2	0.51

<i>Hoxb6</i>	homeobox B6	0.62
<i>Zfp775</i>	zinc finger protein 775	0.58
<i>Fmo3</i>	flavin containing monooxygenase 3	0.61
<i>Mitf</i>	microphthalmia-associated transcription factor	0.53
<i>Ankrd34a</i>	ankyrin repeat domain 34A	0.80
<i>Fam160a1</i>	family with sequence similarity 160, member A1	0.51
<i>Sema4c</i>	sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short	0.48
<i>Snta1</i>	ylntrophin, acidic 1	0.46
<i>Cxxc5</i>	CXXC finger 5	0.57
<i>AK171391</i>	chemokine (C-C motif) receptor 5	0.63
<i>Irx3</i>	Iroquois related homeobox 3	0.71
<i>Foxs1</i>	forkhead box S1	0.62
<i>Cyb561</i>	cytochrome b-561	0.48
<i>Tet1</i>	tet methylcytosine dioxygenase 1	0.66
<i>Hr</i>	hairless	0.49
<i>Ahdc1</i>	AT hook, DNA binding motif, containing 1	0.46
<i>Ypel2</i>	yippee-like 2 (Drosophila)	0.50
<i>Srl</i>	sarcalumenin	0.47
<i>Nkx3-1</i>	NK-3 transcription factor, locus 1 (Drosophila)	1.45
<i>AK134859</i>	chr2:131281304-131281363	0.85
<i>D930015E06Rik</i>	transmembrane 131 like	0.52
<i>AI414108</i>	immunoglobulin superfamily, member 9B	0.43
<i>Ccdc141</i>	coiled-coil domain containing 141	0.50
<i>Hoxb5</i>	homeobox B5	0.50

**Table S7. 50 most highly down regulated genes after noise treatment during the sleep phase (12h, 4d)**

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Hspa1a</i>	heat shock protein 1A	-3.27
<i>Serpine1</i>	serine (or cysteine) peptidase inhibitor, clade E, member 1	-1.88
<i>Ptgs2</i>	prostaglandin-endoperoxide synthase 2	-1.79
<i>Dnajb4</i>	DnaJ heat shock protein family (Hsp40) member B4	-1.70
<i>Nfil3</i>	nuclear factor, interleukin 3, regulated	-1.64
<i>Abra</i>	actin-binding Rho activating protein	-1.55
<i>Irs2</i>	insulin receptor substrate 2	-1.48
<i>Arid5a</i>	AT rich interactive domain 5A (MRF1-like)	-1.47
<i>Per1</i>	period circadian clock 1	-1.42
<i>Errfi1</i>	ERBB receptor feedback inhibitor 1	-1.41
<i>Adamts1</i>	a disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 1	-1.38
<i>Stil</i>	Sc1/Tal1 interrupting locus	-1.38
<i>Cd83</i>	CD83 antigen	-1.33
<i>Nr4a3</i>	nuclear receptor subfamily 4, group A, member 3	-1.33
<i>Sgk1</i>	serum/glucocorticoid regulated kinase 1	-1.26
<i>Dnajb1</i>	DnaJ heat shock protein family (Hsp40) member B1	-1.20
<i>Cited2</i>	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2	-1.19
<i>Csrnp1</i>	cysteine-serine-rich nuclear protein 1	-1.16
<i>Ctgf</i>	connective tissue growth factor	-1.14
<i>Otud1</i>	OTU domain containing 1	-1.13
<i>Gem</i>	GTP binding protein (gene overexpressed in skeletal muscle)	-1.06
<i>Net1</i>	neuroepithelial cell transforming gene 1	-1.00
<i>Bdnf</i>	brain derived neurotrophic factor	-0.98
<i>Klf2</i>	Kruppel-like factor 2 (lung)	-0.95
<i>Rsrp1</i>	arginine/serine rich protein 1	-0.95
<i>Cdkn2b</i>	cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)	-0.94
<i>Fosl2</i>	fos-like antigen 2	-0.93

<i>Gm5148</i>	predicted gene 5148	-0.90
<i>Rcan1</i>	regulator of calcineurin 1	-0.89
<i>AK044623</i>	chr15:81855734-81858323	-0.87
<i>Hspa1l</i>	heat shock protein 1-like	-0.82
<i>Amotl2</i>	angiomin-like 2	-0.81
<i>Siah2</i>	seven in absentia 2	-0.80
<i>Filip1l</i>	filamin A interacting protein 1-like	-0.79
<i>Dusp8</i>	dual specificity phosphatase 8	-0.79
<i>Neurl3</i>	neuralized E3 ubiquitin protein ligase 3	-0.78
<i>Xirp1</i>	xin actin-binding repeat containing 1	-0.76
<i>Trib1</i>	tribbles pseudokinase 1	-0.73
<i>Rasl11b</i>	RAS-like, family 11, member B	-0.73
<i>Usp42</i>	ubiquitin specific peptidase 42	-0.69
<i>Cebpd</i>	CCAAT/enhancer binding protein (C/EBP), delta	-0.68
<i>Ier3</i>	immediate early response 3	-0.68
<i>Nedd9</i>	neural precursor cell expressed, developmentally down-regulated gene 9	-0.68
<i>Tsc22d3</i>	TSC22 domain family, member 3	-0.65
<i>Arid5b</i>	AT rich interactive domain 5B (MRF1-like)	-0.61
<i>Lbh</i>	limb-bud and heart	-0.61
<i>AK170928</i>	zinc finger and BTB domain containing 21	-0.60
<i>Bmp2</i>	bone morphogenetic protein 2	-0.60
<i>Nfkbia</i>	nuclear factor of kappa light polypeptide gene enhancer in B cells inhibitor, alpha	-0.57
<i>Dcun1d3</i>	DCN1, defective in cullin neddylation 1, domain containing 3 ( <i>S. cerevisiae</i> )	-0.54

**Table S8.** 50 most highly up regulated genes after noise treatment during the awake phase (12h, 4d)

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Has3</i>	hyaluronan synthase 3	0.89
<i>AK202495</i>	chr2:151459638-151460046	0.70
<i>Dgkg</i>	diacylglycerol kinase, gamma	0.69
<i>Npy1r</i>	neuropeptide Y receptor Y1	0.67
<i>Eva1c</i>	eva-1 homolog C (C. elegans)	0.71
<i>Spsb1</i>	splA/ryanodine receptor domain and SOCS box containing 1	0.59
<i>Slc38a11</i>	solute carrier family 38, member 11	0.56
<i>Klf15</i>	Kruppel-like factor 15	0.69
<i>Hectd2</i>	HECT domain E3 ubiquitin protein ligase 2	0.65
<i>Adamts15</i>	a disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 15	0.50
<i>Klf9</i>	Kruppel-like factor 9	0.52
<i>Sema3a</i>	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A	0.49
<i>Atoh8</i>	atonal bHLH transcription factor 8	0.55
<i>Phtf2</i>	putative homeodomain transcription factor 2	0.45
<i>Vcan</i>	versican	0.47
<i>Tmem229b</i>	transmembrane protein 229B	0.60
<i>Slc25a33</i>	solute carrier family 25, member 33	0.57
<i>Htr1b</i>	5-hydroxytryptamine (serotonin) receptor 1B	0.52
<i>Csgalnact1</i>	chondroitin sulfate N-acetylgalactosaminyltransferase 1	0.45
<i>A4galt</i>	alpha 1,4-galactosyltransferase	0.45
<i>Slc45a3</i>	solute carrier family 45, member 3	0.55
<i>Fibin</i>	fin bud initiation factor homolog (zebrafish)	0.48
<i>Slc4a7</i>	solute carrier family 4, sodium bicarbonate cotransporter, member 7	0.46
<i>Glt28d2</i>	glycosyltransferase 28 domain containing 2	0.50
<i>Chst3</i>	carbohydrate (chondroitin 6/keratan) sulfotransferase 3	0.43
<i>Lgalsl</i>	lectin, galactoside binding-like	0.39
<i>Tfrc</i>	transferrin receptor	0.45

<i>Bdh1</i>	3-hydroxybutyrate dehydrogenase, type 1	0.44
<i>Ppp1r12b</i>	protein phosphatase 1, regulatory (inhibitor) subunit 12B	0.37
<i>Fbxo40</i>	F-box protein 40	0.47
<i>4930523C07Rik</i>	RIKEN cDNA 4930523C07 gene	0.40
<i>Sacs</i>	sacsin	0.43
<i>AK158301</i>	RAN binding protein 2	0.39
<i>Tll7</i>	tubulin tyrosine ligase-like family, member 7	0.38
<i>Synpo2l</i>	synaptopodin 2-like	0.44
<i>Rgs7bp</i>	regulator of G-protein signalling 7 binding protein	0.42
<i>Ppp1r14c</i>	protein phosphatase 1, regulatory (inhibitor) subunit 14c	0.44
<i>Akap6</i>	A kinase (PRKA) anchor protein 6	0.42
<i>Kcnma1</i>	potassium large conductance calcium-activated channel, subfamily M, alpha member 1	0.38
<i>Prkaa2</i>	protein kinase, AMP-activated, alpha 2 catalytic subunit	0.37
<i>Rock1</i>	Rho-associated coiled-coil containing protein kinase 1	0.42
<i>Gipc2</i>	GIPC PDZ domain containing family, member 2	0.42
<i>Gpr21</i>	G protein-coupled receptor 21	0.48
<i>AK034707</i>	chr3:142244461-142246549	0.38
<i>9330182L06Rik</i>	RIKEN cDNA 9330182L06 gene	0.45
<i>Lancl3</i>	LanC lantibiotic synthetase component C-like 3 (bacterial)	0.40
<i>Ccdc141</i>	coiled-coil domain containing 141	0.42
<i>AK084689</i>	cyclin-dependent kinase-like 5	0.41
<i>Slmap</i>	sarcolemma associated protein	0.35
<i>Edem3</i>	ER degradation enhancer, mannosidase alpha-like 3	0.34

**Table S9.** 50 most highly down regulated genes after noise treatment during the awake phase (12h, 4d)

<b>ID</b>	<b>Description</b>	<b>log2FC</b>
<i>Pck1</i>	phosphoenolpyruvate carboxykinase 1, cytosolic	-1.91
<i>Acsm3</i>	acyl-CoA synthetase medium-chain family member 3	-1.52
<i>Hp</i>	haptoglobin	-1.47
<i>Adig</i>	adipogenin	-1.28
<i>Klhdc7a</i>	kelch domain containing 7A	-1.27
<i>Ankef1</i>	ankyrin repeat and EF-hand domain containing 1	-1.05
<i>Mpz</i>	myelin protein zero	-1.05
<i>Gm5148</i>	predicted gene 5148	-0.91
<i>Arid5a</i>	AT rich interactive domain 5A (MRF1-like)	-0.90
<i>Cd83</i>	CD83 antigen	-0.85
<i>Dusp10</i>	dual specificity phosphatase 10	-0.81
<i>Dnajb1</i>	DnaJ heat shock protein family (Hsp40) member B1	-0.77
<i>Tnnt2</i>	troponin T2, cardiac	-0.76
<i>Ppara</i>	peroxisome proliferator activated receptor alpha	-0.74
<i>Bcl6</i>	B cell leukemia/lymphoma 6	-0.73
<i>Bcl3</i>	B cell leukemia/lymphoma 3	-0.72
<i>G0s2</i>	G0/G1 switch gene 2	-0.68
<i>Slc16a1</i>	solute carrier family 16 (monocarboxylic acid transporters), member 1	-0.67
<i>Pla2g16</i>	phospholipase A2, group XVI	-0.64
<i>Dynlt1f</i>	dynein light chain Tctex-type 1F	-0.63
<i>Sowahc</i>	soondowah ankyrin repeat domain family member C	-0.63
<i>Bambi</i>	BMP and activin membrane-bound inhibitor	-0.62
<i>Angptl4</i>	angiopoietin-like 4	-0.62
<i>Pnpla2</i>	patatin-like phospholipase domain containing 2	-0.61
<i>Bcl6b</i>	B cell CLL/lymphoma 6, member B	-0.59
<i>Tnfsf10</i>	tumor necrosis factor (ligand) superfamily, member 10	-0.59
<i>Tst</i>	thiosulfate sulfurtransferase, mitochondrial	-0.59

<i>Abra</i>	actin-binding Rho activating protein	-0.57
<i>Cdkn2c</i>	cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4)	-0.57
<i>Klf2</i>	Kruppel-like factor 2 (lung)	-0.57
<i>Epha2</i>	Eph receptor A2	-0.55
<i>Arhgef15</i>	Rho guanine nucleotide exchange factor (GEF) 15	-0.55
<i>Acaa2</i>	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase)	-0.55
<i>Fam195a</i>	Mcrip2 - MAPK Regulated Corepressor Interacting Protein 2	-0.55
<i>ApoE</i>	apolipoprotein E	-0.54
<i>Adora1</i>	adenosine A1 receptor	-0.53
<i>Rcan1</i>	regulator of calcineurin 1	-0.53
<i>Siah2</i>	seven in absentia 2	-0.51
<i>AB347309</i>	chr4:103563814-103564162	-0.51
<i>AK140265</i>	mitochondrially encoded 12S rRNA	-0.51
<i>Spry2</i>	sprouty homolog 2 (Drosophila)	-0.51
<i>Psmb8</i>	proteasome (prosome, macropain) subunit, beta type 8 (large multifunctional peptidase 7)	-0.49
<i>Lmo2</i>	LIM domain only 2	-0.49
<i>Clk1</i>	CDC-like kinase 1	-0.48
<i>Vamp5</i>	vesicle-associated membrane protein 5	-0.48
<i>Etfb</i>	electron transferring flavoprotein, beta polypeptide	-0.48
<i>C130074G19Rik</i>	RIKEN cDNA C130074G19 gene	-0.46
<i>Trib1</i>	tribbles pseudokinase 1	-0.45
<i>Adh1</i>	alcohol dehydrogenase 1 (class I)	-0.41
<i>Fam43a</i>	family with sequence similarity 43, member A	-0.41