Supplementary Materials:

Activity-dependent neuroprotective protein deficiency models synaptic and developmental phenotypes of autism-like syndrome

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Supplemental Tables:

Table S1. Detailed numbers of dendrites/slices/slides/animals used for spine quantifications.

Region	Sex	Quantification	Group	No. of animals per group	Animal No.	No. of dendrites	No. of slices	No. of slides
Hippocampus	Males	Spine Subtypes	*Adnp*$^{+/+}$	4	2307	48	7	6
					2308	12	1	1
					2320	11-12	1	1
					2324	12	4	2
			Adnp$^{+/+}$ NAP	4	2310	34-35	6	5
					2311	6	1	1
					2313	8-9	1	1
					2318	13	4	2
			Adnp$^{+/-}$	4	2287	41-42	5	4
					2290	12	1	1
					2592	10-11	4	2
					2647	10	4	2
			Adnp$^{+/-}$ NAP	4	2312	41-42	5	5
					2322	11	1	1
					2325	8	1	1
					2659	11-12	4	2
		Shaft Synapses	*Adnp*$^{+/+}$	2	---	11	---	---
			Adnp$^{+/+}$ NAP	2	---	10	---	---
			Adnp$^{+/-}$	3	---	15	---	---
			Adnp$^{+/-}$ NAP	2	---	10	---	---
		PSD95 Volume	*Adnp*$^{+/+}$	2	2307	8	4	2
					2308	4	1	1
			Adnp$^{+/+}$ NAP	2	2310	6	3	2
					2311	3	2	1
			Adnp$^{+/-}$	3	2290	4	1	1
					2592	4	1	1
					2647	3	1	1
			Adnp$^{+/-}$ NAP	2	2659	6	3	2
					2322	4	2	1
	Females	Spine Subtypes	*Adnp*$^{+/+}$	4	2302	11-12	4	2
					2304	12	4	2
					2604	11	4	2
					2605	12-13	4	2
			Adnp$^{+/+}$ NAP	4	2652	12	4	2
					2654	12	4	2

Region	Sex	Quantification	Group	No. of animals per group	Animal No.	No. of dendrites	No. of slices	No. of slides
					2296	13	4	2
					2305	12	4	2
			Adnp$^{+/-}$	4	2326	12	4	2
					2327	12	4	2
					2328	10-11	4	2
					2491	10	4	2
			Adnp$^{+/-}$ NAP	4	2275	12	4	2
					2276	8-9	3	2
					2277	12	4	2
					2279	12	4	2
		Shaft Synapses	*Adnp*$^{+/+}$	2	---	11	---	---
			Adnp$^{+/+}$ NAP	3	---	26	---	---
			Adnp$^{+/-}$	3	---	19	---	---
			Adnp$^{+/-}$ NAP	3	---	19	---	---
		PSD95 Volume	*Adnp*$^{+/+}$	2	2304	6	2	1
					2604	5	2	1
			Adnp$^{+/+}$ NAP	3	2296	6	2	1
					2305	6	2	1
					2652	3	2	1
			Adnp$^{+/-}$	3	2326	6	2	1
					2327	6	2	1
					2328	6	2	1
			Adnp$^{+/-}$ NAP	3	2275	6	2	1
					2276	6	2	1
					2277	6	2	1
Cortex	Males	Spine Subtypes	*Adnp*$^{+/+}$	4	2307	11-12	4	2
					2308	11	4	2
					2320	12	4	2
					2324	12	4	2
			Adnp$^{+/+}$ NAP	4	2310	10-12	4	2
					2311	12	4	2
					2313	11	4	2
					2318	12	4	2
			Adnp$^{+/-}$	3	2287	16	8	4
					2290	13	8	4
					2647	14	4	2
			Adnp$^{+/-}$ NAP	3	2312	16	8	4
					2322	12-13	6	3
					2325	16	8	4

Region	Sex	Quantification	Group	No. of animals per group	Animal No.	No. of dendrites	No. of slices	No. of slides
		Shaft Synapses and PSD95 Volume	*Adnp*$^{+/+}$	2	2307	11	4	2
					2308	3	1	1
			Adnp$^{+/+}$ NAP	2	2310	8	3	2
					2311	6	2	1
			Adnp$^{+/-}$	3	2290	2	1	1
					2592	9	3	2
					2647	3	1	1
			Adnp$^{+/-}$ NAP	2	2659	9	3	2
					2322	8	2	1
	Females	Spine Subtypes	*Adnp*$^{+/+}$	4	2302	11	4	2
					2304	12	4	2
					2604	12	4	2
					2605	12	4	2
			Adnp$^{+/+}$ NAP	4	2296	12	4	2
					2305	12	4	2
					2652	12	4	2
					2654	13	4	2
			Adnp$^{+/-}$	4	2326	13	4	2
					2327	12	4	2
					2328	11	4	2
					2491	11	4	2
			Adnp$^{+/-}$ NAP	4	2275	12	4	2
					2276	13	4	2
					2277	12	4	2
					2279	12	4	2
		Shaft Synapses and PSD95 Volume	*Adnp*$^{+/+}$	3	2302	6	2	1
					2304	6	2	1
					2604	6	2	1
			Adnp$^{+/+}$ NAP	3	2296	6	2	1
					2305	6	2	1
					2652	6	2	1
			Adnp$^{+/-}$	3	2326	6	2	1
					2327	6	2	1
					2328	6	2	1
			Adnp$^{+/-}$ NAP	3	2275	6	2	1
					2276	5-6	2	1
					2277	6	2	1

Table S2. Spine subtype density comparisons between males and females, as well as hippocampal and cortical areas.

Females vs. Males Brain Area	Spine Subtype Density	*Adnp*$^{+/+}$	*Adnp*$^{+/+}$ NAP	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
Hippocampus	**Total**	**n.s.**	**0.00049916 ↑**	**0.002698 ↑**	**1.89E-10 ↑**
	Shaft Synapses	n.s.	n.s.	4.58825E-05 ↓	0.01544 ↓
	Mushroom	n.s.	n.s.	0.001611 ↑	n.s.
	Stubby	0.040139541 ↑	4.83289E-05 ↑	0.008237 ↑	2.35E-09 ↑
	Thin	n.s.	0.00045322 ↑	n.s.	5.7589E-05 ↑
	PSD95 volume	8.15679E-11 ↑	5.45787E-10 ↑	1.17052E-07 ↑	1.66201E-05 ↑
Cortex	**Total**	**0.00357202 ↓**	**n.s.**	**n.s.**	**2.27E-06 ↓**
	Shaft Synapses	0.014012318 ↑	n.s.	n.s.	n.s.
	Mushroom	0.014781439 ↓	n.s.	n.s.	1.59E-06 ↓
	Stubby	n.s.	0.001033409 ↑	n.s.	0.037241 ↓
	Thin	n.s.	n.s.	n.s.	n.s.
	PSD95 volume	0.001425 ↓	n.s.	n.s.	n.s.
Hippocampus vs. Cortex Sex	**Spine Subtype Density**	***Adnp*$^{+/+}$**	***Adnp*$^{+/+}$ NAP**	***Adnp*$^{+/-}$**	***Adnp*$^{+/-}$ NAP**
Males	**Total**	**0.000216502 ↓**	**2.05038E-05 ↓**	**n.s.**	**7.9183E-16 ↓**
	Shaft Synapses	2.37583E-06 ↑	0.0003957 ↑	2.06962E-08 ↑	0.000503707 ↑
	Mushroom	7.36659E-05 ↓	0.003854881 ↓	0.036597539 ↓	2.78691E-12 ↓
	Stubby	n.s.	n.s.	0.033028365 ↓	1.32393E-07 ↓
	Thin	n.s.	0.004285311 ↓	0.000347728 ↑	n.s.
	PSD95 volume	0.004030141 ↓	n.s.	n.s.	n.s.
Females	**Total**	**n.s.**	**0.030723242 ↓**	**n.s.**	**0.034265918 ↑**
	Shaft Synapses	0.000172024 ↑	1.75813E-07 ↑	1.60686E-05 ↑	0.000122605 ↑
	Mushroom	0.000292588 ↓	6.24211E-07 ↓	n.s.	0.00575343 ↓
	Stubby	0.035190002 ↑	n.s.	n.s.	0.016674454 ↑
	Thin	0.014067183 ↑	0.021815908 ↑	n.s.	0.000215039 ↑
	PSD95 volume	3.22775E-12 ↑	1.76748E-10 ↑	3.5506E-11 ↑	5.36068E-09 ↑

Table S2 depicts p-values for significant differences found for **total spines** and spine subtype densities when comparing males and females within the same brain area, as well as when comparing hippocampal and cortical areas within the same sex. n.s. - not significant. Up- or down-arrows represent increased or decreased density/volume in males vs. females or hippocampus vs. cortex.

Table S3. List of genes analyzed in high-throughput quantitative real-time PCR.

Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
Adnp *(Activity Dependent Neuroprotective Protein)*	ADNP (Activity-Dependent Neuroprotective Protein or Activity Dependent Neuroprotector Homeobox) is a Protein Coding gene. This gene encodes a protein that is upregulated by vasoactive intestinal peptide (VIP) and may be involved in its stimulatory effect on certain tumor cells. Diseases associated with ADNP include ADNP syndrome (Helsmoortel-Van Der Aa Syndrome)/Adnp-Related Intellectual Disability within Autism Spectrum Disorder. ADNP expression is also deregulated in neurodegenerative and psychiatric diseases as well as cancer.	Autism-mutated gene	NM_001310086.1 NM_009628.3 NM_001310088.1	11538	ACGAAAAATCAGGACTATCGG	GGACATTCCGGAAATGACT
Adnp2 *(Activity Dependent Neuroprotective Protein2)*	An important paralog of ADNP. May be involved in transcriptional regulation.	Adnp's paralog	NM_175028.1	22850	TCTGGAAAGAAAGCGAGATAC	TGATATCGATGCAGGTGATT
Abcf3 *(ATP Binding Cassette Subfamily F Member 3)*	This gene encodes a member of the ATP-binding cassette (ABC) transporter superfamily. ATP-binding cassette proteins transport various molecules across extra- and intracellular membranes. The protein encoded by this gene displays antiviral effect against flaviviruses.	Affymetrix array	NM_013852.2	27406	GAACAGTCCTCGACAGTAAATG	GTTGCTGGTCTTCAGTGTTT
Acvr1c *(Activin A Receptor, type IC)*	ACVR1C is a type I receptor for the TGFB (see MIM 190180) family of signaling molecules. Such ligands include activin and bone morphogenetic proteins (BMPs). Members of this family are involved in many processes, including embryogenesis and tissue homeostasis.	Affymetrix array	NM_001111030.1 NM_001033369.3	269275	TTCAGTTGGAGGAGTTGTTGA	GGAGATTTGGTCGGAGTTTC
ApoE *(Apolipoprotein E)*	The protein encoded by this gene is a major apoprotein of the chylomicron. It binds to a specific liver and peripheral cell receptor, and is essential for the normal catabolism of triglyceride-rich lipoprotein constituents. Among its related pathways are Transcription Role of VDR in regulation of genes involved in osteoporosis and metabolism of fat-soluble vitamins.	Affymetrix array	NM_009696.4 NM_001305819.1 NM_001305843.1 NM_001305844.1	11816	ACCGCTTCTGGGATTACCT	ATCAGTGCCGTCAGTTCTT
Bmp1 *(Bone Morphogenetic Protein 1)*	This gene encodes a protein that is capable of inducing formation of cartilage in vivo. Among its related pathways are GPCR Pathway and PEDF Induced Signaling.	Affymetrix array, Mouse and human RNA-seq	NM_009755.3	12153	TACAGCCAGGGCAGGAGTAT	CTTGCTGAGTCGGGTCCTTT
Fpr-rs3 *(Formyl Peptide Receptor, Related Sequence 3)*	FPR3 (Formyl Peptide Receptor 3) is a G-protein-coupled receptor, expressed mainly by mammalian phagocytic leukocytes. FPRs are involved in antibacterial host defense and inflammation.	Affymetrix array	NM_008040.2	14290	GGTGACTTCTCTTTCATGGTTAC	ATGTGCACAATGCTGAGAAC
Lipa *(Lipase A, Lysosomal Acid Type)*	This gene encodes lipase A, the lysosomal acid lipase (also known as cholesterol ester hydrolase). This enzyme functions in the lysosome to catalyze the hydrolysis of cholesteryl esters and triglycerides. Among its related pathways are Cholesterol and Sphingolipids transport / Distribution to the intracellular membrane compartments (normal and CF) and cholesterol biosynthesis I.	Affymetrix array	NM_001111100.1 NM_021460.3	16889	GCTGCACCATAGGTTTCATA	ACGGGAGCCAAGACTAAA
Masp1 *(Mannan Binding Lectin Serine Peptidase 1)*	This gene encodes a serine protease that functions as a component of the lectin pathway of complement activation. The complement pathway plays an essential role in the innate and adaptive immune response.	Affymetrix array	NM_008555.2	17174	CATGGCTGTAGATGTGGAT	CAGTAGTAGCCACCGATGTAG
Msh5 *(MutS Homolog 5)*	This gene encodes a member of the mutS family of proteins that are involved in DNA mismatch repair and meiotic recombination. This protein plays a role in promoting ionizing radiation-induced apoptosis.	Affymetrix array	NM_013600.3 NM_001146215.2	17687	CTCAAGTTCCTGAGTCGAAG	CTCACCAGATGGGTCAATAC
Nr4a2 *(Nuclear Receptor Subfamily 4 Group A Member 2)*	This gene encodes a member of the steroid-thyroid hormone-retinoid receptor superfamily and may act as a transcription factor. It is crucial for expression of a set of genes such as SLC6A3, SLC18A2, TH and DRD2 which are essential for development of mdDA neurons.	Affymetrix array	NM_001139509.1 NM_013613.2	18227	TGGACTATTCCAGGTTCCA	CGGTCAGGAGATCGTAGAA
Nts *(Neurotensin)*	This gene encodes a common precursor for two peptides, neuromedin N and neurotensin and may function as a neurotransmitter or a neuromodulator.	Affymetrix array	NM_024435.2	67405	GCATACATCCAAGATCAGCA	CGGGCTGTTCACGTTATT
Pax6 *(Paired Box 6)*	This gene encodes a homeobox and paired domain-containing protein that binds DNA and functions as a regulator of transcription. Activity of this protein is key in the development of neural tissues, particularly the eye. Among its related pathways	Affymetrix array	NM_001244198.2 NM_001244200.2 NM_013627.6 NM_001244201.2	18508	ACCCAGTGTGTCATCAATAAA	GTCTGCCCGTTCAACAT

Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
	are Incretin synthesis, secretion, and inactivation and mesodermal commitment pathway.		NM_001244202.2 NM_001310144.1 NM_001310145.1 NM_001310146.1			
Slc9a3 *(Solute Carrier Family 9 Member A3)*	The protein encoded by this gene is an epithelial brush border Na/H exchanger that uses an inward sodium ion gradient to expel acids from the cell. Among its related pathways are Transport of glucose and other sugars, bile salts and organic acids, metal ions and amine compounds and Collagen chain trimerization.	Affymetrix array	NM_023055.2 NM_023449.3	105243	GTTCAACCTGCATAGTGACAAG	TCTGCCCATTCACCTCA
Tgfa *(Transforming Growth Factor Alpha)*	Is a ligand for the epidermal growth factor receptor, which activates a signaling pathway for cell proliferation, differentiation and development. This gene has been associated with many types of cancers, and may be involved in some cases of cleft lip/palate.	Affymetrix array	NM_031199.4	21802	GCAAACACTGTGAGTGGTG	TCTTCAGACCACTGTCTCAGA
Tnfrsf11b *(tumor necrosis factor receptor superfamily, member 11b)*	A member of the TNF receptor superfamily of proteins, which plays a role in cell survival, apoptosis, and inflammation.	Affymetrix array	NM_008764.3	21937	CATTTGGCCTCCTGCTAAT	TCACACAGGGTGACATCTATTC
Wfs1 *(Wolframin ER Transmembrane Glycoprotein)*	This gene encodes a transmembrane protein. Among its related pathways is protein processing in endoplasmic reticulum. Participates in the regulation of cellular Ca(2+) homeostasis, at least partly, by modulating the filling state of the endoplasmic reticulum Ca(2+) store.	Affymetrix array	NM_011716.2	22393	GTCAGCAGTGAATCCAAGAA	AACAGGTTGGTGGGAATG
Akt1 *(AKT Serine/Threonine Kinase 1)*	AKT1 is activated by platelet-derived growth factor, relies on the PI3K pathway, and is recognized as a critical node in the pathway.	Autism-related gene	NM_009652.3 NM_001165894.1 NM_001331107.1	11651	CTTCTATGGTGCGGAGATTG	GAGGTTCTCCAGCTTCAGG
Akt3 *(AKT Serine/Threonine Kinase 3)*	AKT3 is one of 3 closely related serine/threonine-protein kinases (AKT1, AKT2 and AKT3) called the AKT kinase, and which regulate many processes including metabolism, proliferation, cell survival, growth and angiogenesis.	Autism-related gene	NM_011785.3	23797	CGAACACTCTCTTCAGATGC	CTCCACCAAGGCGTTTAT
Cntnap2 *(Caspr2, Contactin Associated Protein-Like 2)*	This gene encodes a member of the neurexin family which functions in the vertebrate nervous system as cell adhesion molecules and receptors.	Autism-related gene	NM_025771.3 NM_001004357.2	66797	TCACTTGGATTCAGCCAG	CCTCCAATGATAGCTGAGTTT
EIf4e *(Eukaryotic Translation Initiation Factor 4E)*	The protein encoded by this gene is a component of the eukaryotic translation initiation factor 4F complex. The encoded protein aids in translation initiation by recruiting ribosomes to the 5'-cap structure.	Autism-related gene	NM_007917.4 NM_001313980.1	13684	TCTGGCTAGAGACACTGCTG	AGTCCATATTGCTATCTTATCACC
Foxp1 *(Forkhead Box P1)*	This gene belongs to subfamily P of the forkhead box (FOX) transcription factor family. Forkhead box transcription factors play important roles in the regulation of tissue- and cell type-specific gene transcription during both development and adulthood.	Autism-related gene	NM_053202.2 NM_001197321.1 NM_001197322.1 NM_001347345.1	108655	GCGAGTAGAGAACGTTAAAGG	GGAAGGGTTACCACTGATCT
Foxp2 *(Forkhead Box P2)*	This gene encodes a member of the forkhead/winged-helix (FOX) family of transcription factors. It is expressed in fetal and adult brain as well as in several other organs such as the lung and gut.	Autism-related gene	NM_053242.4 NM_212435.1 NM_001286607.1	114142	TGGATTGAATGTATGTGTGG	CACGAAGACCTCAATGGTT
Mecp2 *(Methyl-CpG Binding Protein 2)*	DNA methylation is the major modification of eukaryotic genomes and plays an essential role in mammalian development. Human proteins MECP2, MBD1, MBD2, MBD3, and MBD4 comprise a family of nuclear proteins related by the presence in each of a methyl-CpG binding domain (MBD).	Autism-related gene	NM_001081979.2	17257	GAGGAGAGACTGGAGGAAAA	GCTCATGCTTGCCTTCTT
Mtor *(Mechanistic Target of Rapamycin)*	The protein encoded by this gene belongs to a family of phosphatidylinositol kinase-related kinases. These kinases mediate cellular responses to stresses such as DNA damage and nutrient deprivation.	Autism-related gene	NM_020009.2	56717	GTACCGGCACACATTTGAAG	CGATCATCTCGATTCATACCC
Nlgn1 *(Neuroligin 1)*	This gene encodes a member of a family of neuronal cell surface proteins.	Autism-related gene	NM_138666.3 NM_001163387.1	192167	AAACTGGTGACCCAAATCAA	GCTGGTCTTTCTGGGAATATC
Nlgn2 *(Neuroligin 2)*	This gene encodes a member of a family of neuronal cell surface proteins.	Autism-related gene	NM_198862.2	216856	CCTGAACGCATCACTATCTT	CTTCTGGAACAGTCCTTCTG
Nlgn3 *(Neuroligin 3)*	This gene encodes a member of a family of neuronal cell surface proteins.	Autism-mutated risk gene	NM_172932.4	245537	GCCTCTATCTGAATGTGTATGTG	GTCTCGGATGTCTTCATCTTC

Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
Shank2 *(SH3 And Multiple Ankyrin Repeat Domains 2)*	This gene encodes a protein that is a member of the Shank family of synaptic proteins that may function as molecular scaffolds in the postsynaptic density of excitatory synapses.	Autism-related gene, Human RNA-seq	NM_001081370.2 NM_001113373.2	210274	AACGTGGCCATCGAATC	CGTACACGGAATTCACATCA
Shank3 *(SH3 And Multiple Ankyrin Repeat Domains 3)*	This gene is a member of the Shank gene family. Shank proteins are multidomain scaffold proteins of the postsynaptic density that connect neurotransmitter receptors, ion channels, and other membrane proteins to the actin cytoskeleton and G-protein-coupled signaling pathways.	Autism-related gene	NM_021423.3	58234	GCAATTACAACAGCCAGACA	TTCCCTGAATGGTACGACAT
Slc6a4 *(Solute Carrier Family 6 Member 4)*	This gene encodes an integral membrane protein that transports the neurotransmitter serotonin from synaptic spaces into presynaptic neurons.	Autism-related gene	NM_010484.2	15567	CAAAACGTCTGGCAAGGT	TCAAGTAAAAGACAACCCCTCTC
Tsc1 *(Tuberous Sclerosis 1)*	This gene encodes a growth inhibitory protein thought to play a role in the stabilization of tuberin. Mutations in this gene have been associated with tuberous sclerosis.	Autism and vocalization related gene	NM_001289575.1 NM_001289576.1 NM_022887.4	64930	CTCGAAGGTGGAAGACATTAG	AGCTGGTGTGACACAGAATAG
Becn1 *(Beclin 1)*	This gene encodes a protein that regulates autophagy, a catabolic process of degradation induced by starvation.	Autophagy-related gene linked with Adnp	NM_019584.3	56208	CAAATCTAAGGAGTTGCCGTT	CTTCTTTGAACTGCTGCACAC
Gad1(67) *(Glutamate Decarboxylase 1)*	This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes.	Catalyzes GABA production and associated with autism	NM_008077.5 NM_001312900.1	14415	GGGAGCGGATCCTAATACT	CCTTTGTAAGAAGCCACAGA
Gad2(65) *(Glutamate Decarboxylase 2)*	This gene encodes one of several forms of glutamic acid decarboxylase, identified as a major autoantigen in insulin-dependent diabetes.	Catalyzes GABA production and associated with autism	NM_008078.2	14417	TTCGGATCTGAAGATGGCT	CATAGAGCAGAGCGCACAG
Akap6 *(A-Kinase Anchoring Protein 6)*	The A-kinase anchor proteins (AKAPs) are involved in anchoring protein kinase A (PKA) to the nuclear membrane or sarcoplasmic reticulum. Among its related pathways are activation of cAMP-Dependent PKA and DAG and IP3 signaling.	Human RNA-seq	NM_198111.2	238161	CGTCTCACAAAGCAGGACTGA	TCGTCCTCCACAGACACATC
Bmp4 *(Bone Morphogenetic Protein 4)*	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression.	Human RNA-seq	NM_007554.3 NM_001316360.1	12159	ATCACGAAGAACATCTGGAGAA	CTGCTGAGGTTGAAGAGGAA
Aif1 *(Iba1, Ionized Calcium-Binding Adapter Molecule 1)*	This gene encodes a protein that binds actin and calcium. This gene is induced by cytokines and interferon and may promote macrophage activation and growth of vascular smooth muscle cells and T-lymphocytes.	Immunity-related gene	NM_019467.2	11629	TGAAGCCTTCAAGGTGAAGTA	CTCCAGCATTCGCTTCA
Ccl5 *(C-C Motif Chemokine Ligand 5)*	This gene is a member of the CC subfamily, functions as a chemoattractant for blood monocytes, memory T helper cells and eosinophils. It causes the release of histamine from basophils and activates eosinophils. Among its related pathways are peptide ligand-binding receptors and PEDF Induced Signaling.	Immunity-related gene	NM_013653.3	20304	GCAGTCGTGTTTGTCACTC	ACCCTCTATCCTAGCTCATCTC
Cd40lg (Cluster of differentiation 40 Ligand)	The protein encoded by this gene is expressed on the surface of T cells. It regulates B cell function by engaging CD40 on the B cell surface.	Immunity-related gene	NM_011616.2	21947	CCAGCGAGCATGAAGATT	TTCCTCTTCGACCTTATCCA
Cd69 (Cluster of differentiation 69 Molecule)	A member of the calcium dependent lectin superfamily of type II transmembrane receptors. Its Expression is induced upon activation of T lymphocytes, and may act to transmit signals in natural killer cells and platelets. Among its related pathways are Kit receptor signaling pathway and B Cell Development Pathways.	Immunity-related gene	NM_001033122.3	12515	GCCTTAAATGTGGGCAAGTA	TCCACTCATTCTTGCAGGTAG
Gm-csf *(Granulocyte-macrophage colony-stimulating factor)*	The protein encoded by this gene is a cytokine that controls the production, differentiation, and function of granulocytes and macrophages. Among its related pathways are RET signaling and IL-15 Signaling Pathways.	Immunity-related gene	NM_009969.4	12981	GCCTGTCACGTTGAATGA	AGACCCTGCTCGAATATCTTC

Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
IFNG *(Interferon Gamma)*	This gene encodes a soluble cytokine that is a member of the type II interferon class. The encoded protein is secreted by cells of both the innate and adaptive immune systems.	Immunity-related gene	NM_008337.4	15978	GAGGAACTGGCAAAAGGAT	TCAAGACTTCAAAGAGTCTGAGG
Il1b *(Interleukin 1-Beta)*	The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis.	Immunity-related gene	NM_008361.4	16176	GTGGCAGCTACCTGTGTCTT	AGAGGATGGGCTCTTCTTCA
Il1rapl1 *(Interleukin 1 Receptor Accessory Protein-like 1)*	The protein encoded by this gene is a member of the interleukin-1 receptor family and is similar to the interleukin 1 accessory proteins. This gene and IL1RAPL2 are located at a region on chromosome X that is associated with X-linked non-syndromic mental retardation.	Immunity-related gene	NM_001160403.1	331461	CGCCTTTGATGGAAGTAGAA	TGTGGAATTCCTGATGACAC
Il6 *(Interleukin 6)*	This gene encodes a cytokine that functions in inflammation and the maturation of B cells. The protein is primarily produced at sites of acute and chronic inflammation and induces a transcriptional inflammatory response through interleukin 6 receptor, alpha.	Immunity-related gene	NM_031168.2 NM_001314054.1	16193	GCTACCAAACTGGATATAATCAGG	CCAGGTAGCTATGGTACTCCAG
Il8 *(Interleukin 8)*	A member of the CXC chemokine family. This chemokine is one of the major mediators of the inflammatory response. It functions as a chemoattractant, and is also a potent angiogenic factor.	Immunity-related gene	NM_011339.2	20309	GAAGTGATAGCAGTCCCAAA	AGGTCCTCAGGTAGGAACC
Il10 *(Interleukin 10)*	A cytokine produced primarily by monocytes and to a lesser extent by lymphocytes. This cytokine has pleiotropic effects in immunoregulation and inflammation. It down-regulates the expression of Th1 cytokines, MHC class II Ags, and costimulatory molecules on macrophages.	Immunity-related gene	NM_010548.2	16153	GCGCTGTCATCGATTTCT	CACCTTGGTCTTGGAGCTTAT
Il12A *(Interleukin 12A)*	A cytokine that acts on T and natural killer cells, and has a broad array of biological activities. This cytokine is required for the T-cell-independent induction of interferon (IFN)-gamma, and is important for the differentiation of both Th1 and Th2 cells. Among its related pathways are TRAF Pathway and Allograft rejection.	Immunity-related gene	NM_001159424.2 NM_008351.3	16159	GTCTTTGATGATGACCCTGTG	TCTGCTGATGGTTGTGATTCT
Lgals3 *(lectin, galactose binding, soluble 3)*	The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. It appears to be implicated in immune response associated with natural killer (NK) and lymphokine-activated killer (LAK) cell cytotoxicity.	Immunity-related gene	NM_001145953.1 NM_010705.3	16854	CCAACGCAAACAGGATT	CAATGACTCTCCTGTTGTTCTC
Tnfα *(Tumor Necrosis Factor Alpha)*	A cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages and is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation.	Immunity-related gene	NM_013693.3 NM_001278601.1	21926	CCTATGTCTCAGCCTCTTCTCAT	GGAACTTCTCATCCCTTTGG
Mbp *(Myelin Basic Protein)*	The protein encoded is a major constituent of the myelin sheath of oligodendrocytes and Schwann cells in the nervous system. However, MBP-related transcripts are also present in the bone marrow and the immune system.	MBP was previously investigated in autistic children. Also, ADNP was previously suggested to impact myelin formation	NM_001025251.2 NM_001025254.2 NM_001025255.2 NM_001025256.2 NM_001025258.2 NM_001025259.2 NM_010777.3	17196	AAGGACTCACACACGAGAACTA	TGTTCGAGGTGTCACAATG
Cacna1e *(Calcium Voltage-Gated Channel Subunit Alpha1 E)*	Voltage-dependent calcium channels are multi-subunit complexes mediating the entry of calcium ions into excitable cells, and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death.	Mouse RNA-seq	NM_009782.3	12290	TTGCCAACTGCATCGT	TGAAATATGGTTCTGTCTTCTCC
Cga *(Glycoprotein Hormones, Alpha Polypeptide)*	The protein encoded by this gene belongs to the glycoprotein hormones alpha chain family. Among its related pathways is the transcription role of vitamin D receptor (VDR) in regulation of genes involved in osteoporosis and amine-derived hormones.	Mouse RNA-seq	NM_009889.2	12640	CCAGGTCCAAGAAGACAATG	TCCCATTACTGTGGCCTTAG

Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
Crb2 *(Crumbs 2, Cell Polarity Complex Component)*	This gene encodes a member of a family of proteins that are components of the Crumbs cell polarity complex. In mammals, members of this family are thought to play a role in many cellular processes in early embryonic development.	Mouse RNA-seq	NM_001163566.1	241324	CGATGGAGAACTCAAGTTGG	TGAAACAGGGATTGGGATT
Ddx3y *(DEAD-Box Helicase 3, Y-Linked)*	The protein encoded by this gene is a member of the DEAD-box RNA helicase family, characterized by nine conserved motifs, included the conserved Asp-Glu-Ala-Asp (DEAD) motif. These motifs are thought to be involved in ATP binding, hydrolysis, RNA binding, and in the formation of intramolecular interactions.	Mouse RNA-seq	NM_012008.2	26900	GAGGAAATACAGAGAGCAAAGG	TCCATCCTGAACTGTCCTTAT
Defb20 *(Defensin Beta 119)*	This gene encodes a member of the beta subfamily of defensins.	Mouse RNA-seq	NM_176950.3	319579	GTCTCGGGAGGATCTGAA	GTGCACCATCTGCAAGTG
E230025N22Rik *(Riken cDNA E230025N22 gene)*	Kinesin motor domain. P-loop containing nucleoside triphosphate hydrolase.	Mouse RNA-seq	NM_172831.2	240216	ACTCTGGGAACTACAGGTTGTAAA	GTGGCTCGCCTTTAACCT
Fgf23 *(Fibroblast Growth Factor 23)*	This gene encodes a member of the fibroblast growth factor family of proteins, which possess broad mitogenic and cell survival activities and are involved in a variety of biological processes.	Mouse RNA-seq	NM_022657.4	64654	CTACAGTGCCCTGATGATTACA	CTGAAGTGAAGCGATCCAA
Gdf15 *(Growth Differentiation Factor 15)*	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression.	Mouse RNA-seq	NM_011819.3 NM_001330687.1	23886	GAGCTACGGGGTCGCTT	CACCTCTGGACTGAGTATCCG
Gm21949 *(IQCJ-SCHIP1 Readthrough)*	This locus represents naturally occurring read-through transcription from the neighboring IQ motif containing J (IQCJ) and schwannomin interacting protein 1 (SCHIP1) genes.	Mouse RNA-seq	NM_001113419.2	100505386	GCAGCACACCCGATTAC	TGGTGGAGTTGGATTGTG
Hist1h3b *(Histone Cluster 1 H3 Family Member B)*	Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes.	Mouse RNA-seq	NM_178203.2	319150	AGCGTGTCACCATCATGC	TGGGTTCCAGTTTGCACTT
Hjurp *(Holliday Junction Recognition Protein)*	Centromeric protein that plays a central role in the incorporation and maintenance of histone H3-like variant CENPA at centromeres.	Mouse RNA-seq	NM_198652.2	381280	GCTGATAGCGAAGTACAACCA	CCTTCTTCATCAGCTTTCCTC
Hsd17b2 *(Hydroxysteroid 17-Beta Dehydrogenase 2)*	17β-HSD2 is involved in inactivation of androgens and estrogens, being accurately describable as "antiandrogenic" and "antiestrogenic", and is the key 17β-HSD isozyme in androgen and estrogen inactivation.	Mouse RNA-seq	NM_008290.2	15486	CAGCTCTAACCATGTTCTCAAC	TGTGAGCCTGTGATGTTTG
Kdm5d *(Lysine Demethylase 5D)*	This gene encodes a protein containing zinc finger domains. A short peptide derived from this protein is a minor histocompatibility antigen which can lead to graft rejection of male donor cells in a female recipient.	Mouse RNA-seq	NM_011419.3	20592	CATGGAGTGCCAGTTGTT	CACTGCCTCAGCAAAGTTA
Klf1 *(Kruppel Like Factor 1)*	This gene encodes a hematopoietic-specific transcription factor that induces high-level expression of adult beta-globin and other erythroid genes.	Mouse RNA-seq	NM_010635.2	16596	GGACTTCCTCAAGTGGTGG	AAGGGTCCTCCGATTTCA
Loc547349	Major histocompatibility complex (MHC) class I family member. Their function is to display fragments (on cell surface) of non-self-peptides from within the cell (degradation of cytosolic proteins by the proteasome) to cytotoxic T cells.	Mouse RNA-seq	NM_001025208.1	547349	AGGGTGGCTCTCACACATT	GATGTAATCTTGGCCTTCGTAAG
Mndal *(Myeloid Cell Nuclear Differentiation Antigen like)*	The myeloid cell nuclear differentiation antigen (MNDA) is detected only in nuclei of cells of the granulocyte-monocyte lineage. Among its related pathways are apoptosis, autophagy and innate immune system response.	Mouse RNA-seq	NM_001170853.1	100040462	AGATAAGCTCCACCTCTTCTGC	GACCTTGATCTTGACGAAACTG
Myl2 *(Myosin Light Chain 2)*	This gene encodes the regulatory light chain associated with cardiac myosin beta (or slow) heavy chain. Ca+ triggers the phosphorylation of regulatory light chain that in turn triggers contraction.	Mouse RNA-seq	NM_010861.4	17906	GCCCTAGGACGAGTGAA	CCAAACATCGTGAGGAAC
Npvf *(Neuropeptide VF Precursor)*	Neuropeptide VF precursor, also known as pro-FMRFamide-related neuropeptide VF or RFamide-related peptide precursor, is a propeptide that in mammals is encoded by the NPVF (or RPFP) gene. The NPVF gene, and thus the propeptide, are expressed in neurons in the mediobasal hypothalamus. NPVF has been found to potently inhibit gonadotropin secretion.	Mouse RNA-seq	NM_021892.1	60531	AGTTGCTCTACGTCATGATCTG	TTCCACAAACGCTCCTCT
Olfr1347 *(Olfactory Receptor 1347)*	Olfactory receptors interact with odorant molecules in the nose, to initiate a neuronal response that triggers the perception of a smell.	Mouse RNA-seq	NM_146385.1	258383	GTCACAAAGAGCTCCACAAG	TCCACAGTCCCACGAGTA

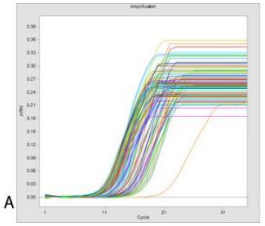
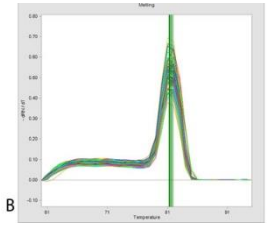
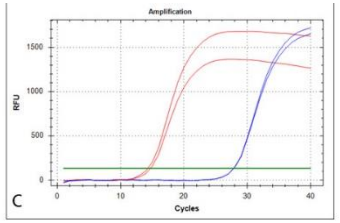
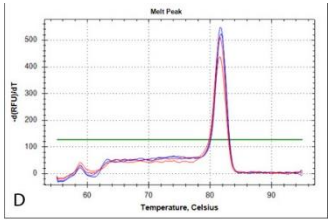
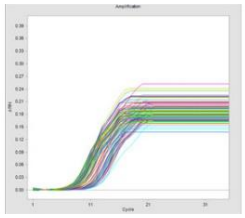
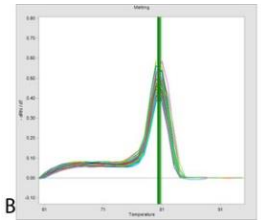
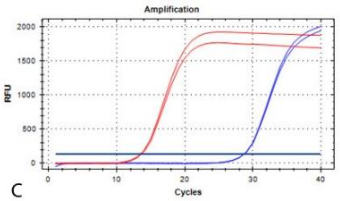
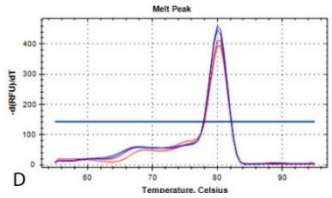
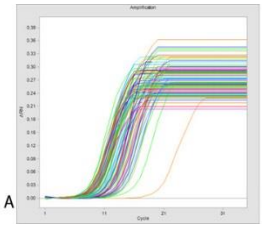
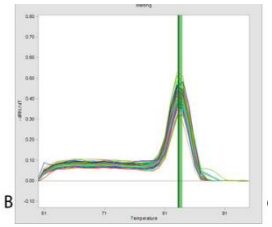
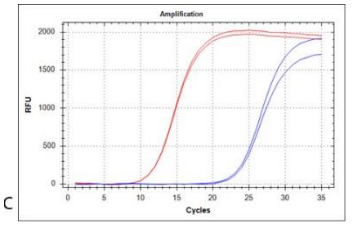
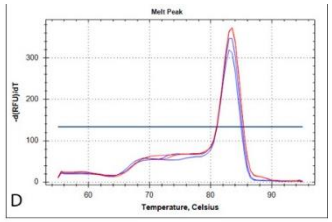
Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
Pax3 *(Paired Box 3)*	This gene is a member of the paired box (PAX) family of transcription factors. May regulate cell proliferation, migration and apoptosis. Involved in neural development and myogenesis.	Mouse RNA-seq	NM_008781.4 NM_001159520.1	18505	CTATTCCACAAGCCGTGTC	TGCGTTCGAAGGAATAGTG
Per1 *(Period Circadian Clock 1)*	This gene is a member of the Period family of genes and is expressed in a circadian pattern in the suprachiasmatic nucleus, the primary circadian pacemaker in the mammalian brain.	Mouse RNA-seq	NM_011065.5 NM_001159367.2	18626	TCTATGGCTCTACTACACCATCTC	TCAGGACCTCCTCTGATTC
Sox5 *(SRY-Box 5)*	This gene encodes a member of the SOX (SRY-related HMG-box) family of transcription factors involved in the regulation of embryonic development and in the determination of the cell fate.	Mouse RNA-seq	NM_001243163.1 NM_001113559.2 NM_011444.3	20678	CCAGAAGACACTCCCAGTATT	GCTCTCAGGAGTCCCTTTT
Tubb1 *(Tubulin Beta 1 Class VI)*	This gene encodes a member of the beta tubulin protein family. Beta tubulins are one of two core protein families (alpha and beta tubulins) that heterodimerize and assemble to form microtubules.	Mouse RNA-seq	NM_001080971.2	545486	GAAGCCTACGGTAAGAAGTATGTG	CTGTCAGGCTGAAAGAGGAC
Cd96 *(Cluster of differentiation 96 Molecule)*	The protein encoded by this gene belongs to the immunoglobulin superfamily. It is a type I membrane protein. The protein may play a role in the adhesive interactions of activated T and NK cells during the late phase of the immune response. Among its related pathways are Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell and Natural Killer Cell Receptors: Human Target Cell - NK Cell Ligand-Receptor Interactions.	Mouse and human RNA-seq	NM_032465.2	84544	TGGTATCGGTATCAAAATGAAATC	CCAATGGGTTCTTGAATATACG
Cdh17 *(Cadherin 17)*	This gene is a member of the cadherin superfamily, genes encoding calcium-dependent, membrane-associated glycoproteins.	Mouse and human RNA-seq	NM_019753.4	12557	GGCCTGACTGTGAGTTATTC	GCGGAGCAGCACTAAATA
Chl1 *(Cell Adhesion Molecule L1 Like)*	The protein is a member of the L1 gene family of neural cell adhesion molecules. It is a neural recognition molecule that may be involved in signal transduction pathways, may also play a role in the growth of certain cancers and in synaptic plasticity. May also play a role in regulating cell migration in nerve regeneration and cortical development.	Mouse and human RNA-seq	NM_007697.2	12661	CACCGTGGATCAAAAATTC	CTGTTGAACGGAGAGTGGT
Hmx3 *(H6 Family Homeobox 3)*	HMX3 (H6 Family Homeobox 3) is a transcription factor involved in specification of neuronal cell types and which is required for inner ear and hypothalamus development. Controls semicircular canal formation in the inner ear. Also required for hypothalamic/pituitary axis of the CNS (By similarity).	Mouse and human RNA-seq	NM_008257.3	15373	ACCAGAAGCCTCGGAAAA	TCGCTCTCTTCCAGAATGAT
Myl9 *(Myosin Light Chain 9)*	Myosin, a structural component of muscle, consists of two heavy chains and four light chains. The protein encoded by this gene is a myosin light chain that may regulate muscle contraction by modulating the ATPase activity of myosin heads.	Mouse and human RNA-seq	NM_172118.1	98932	TGATAAGGAGGACCTGCAC	GCCCTCCAGATACTCGTCT
Chat *(Choline O-Acetyltransferase)*	This gene encodes an enzyme which catalyzes the biosynthesis of the neurotransmitter acetylcholine.	Neuro-transmission-related	NM_009891.2	12647	CTGGACAGCCAATCCATT	GAAGCCGGTATGATGAGAAG
Slc17a7 *(Vglut1, Solute Carrier Family 17 Member 7)*	The protein encoded by this gene is a vesicle-bound, sodium-dependent phosphate transporter that is specifically expressed in the neuron-rich regions of the brain. It is preferentially associated with the membranes of synaptic vesicles and functions in glutamate transport.	Neuro-transmission and vocalization related	NM_182993.2	72961	CTATGTCTATGGCAGCTTCG	TCAATGTATTTGCGCTCCT
Dbn1 *(Drebrin 1)*	The protein encoded by this gene is a cytoplasmic actin-binding protein thought to play a role in the process of neuronal growth. It is a member of the drebrin family of proteins that are developmentally regulated in the brain.	Synapse-related	NM_001177372.1 NM_001177371.1 NM_019813.4	56320	CCTCCAGAAATCGACATCAC	CAGTCGCCGCTACTAATCA
Dlg4 *(Psd95, Post-Synaptic Density Protein 95)*	This gene encodes a member of the membrane-associated guanylate kinase (MAGUK) family. It heteromultimerizes with another MAGUK protein, DLG2, and is recruited into NMDA receptor and potassium channel clusters. These two MAGUK proteins may interact at postsynaptic sites to form a multimeric scaffold for the clustering of receptors, ion channels, and associated signaling proteins.	Synapse-related	NM_001109752.1 NM_007864.3	13385	CTGTCGGTCAATGGTGTT	CGGCTATACTCTTCTGGTTTATAC
Glut *(Glial High Affinity Glutamate Transporter)*	This gene encodes a member of a high affinity glutamate transporter family. This gene functions in the termination of excitatory neurotransmission in central nervous system.	Synapse-related	NM_148938.3	20512	CCTCACCAAGGAAGATGTTAAG	AGGATTGTACCCACAATGACA
Slc12A2 *(Solute Carrier Family 12 Member 2)*	The protein encoded by this gene mediates sodium and chloride transport and reabsorption. The encoded protein is a membrane protein and is important in maintaining proper ionic balance and cell volume.	Synapse-related	NM_009194.3	20496	CAGTCAGCCATACCCAAAG	GAACAACACACGAACCCA

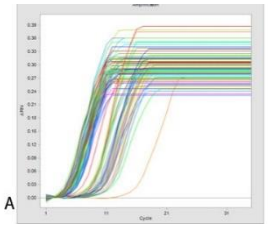
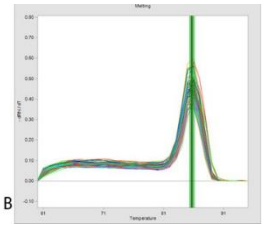
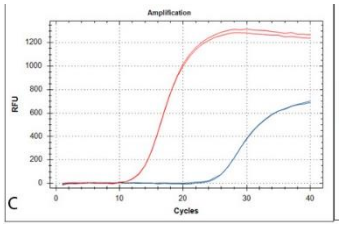
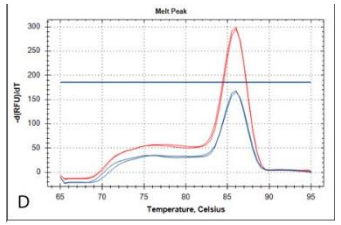
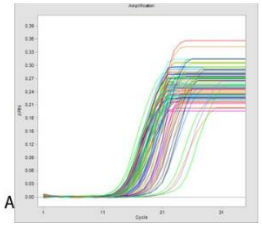
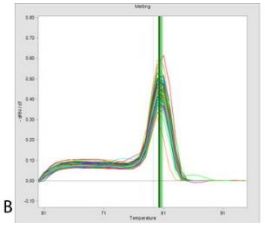
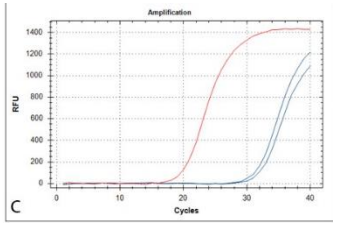
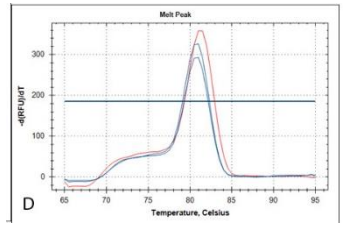
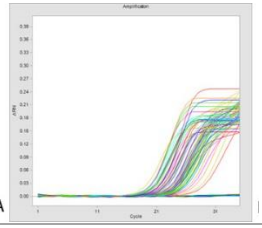
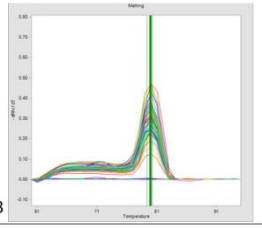
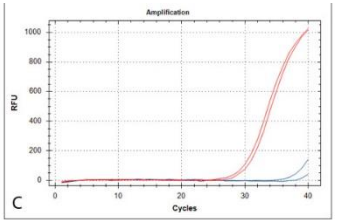
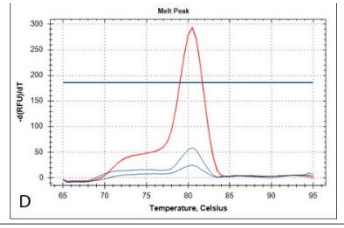
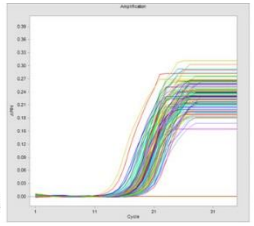
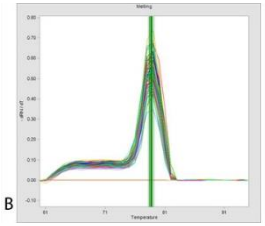
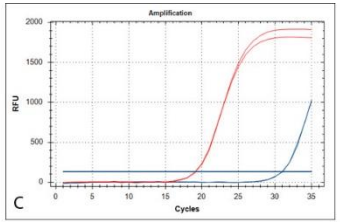
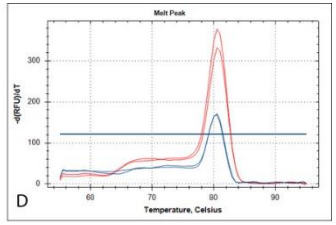
Gene Symbol and Name	Gene Description	Reason of Choice	Accession Number	Gene ID	Sense Primer (5'->3')	Antisense Primer (5'->3')
Snap25 *(Synaptosome Associated Protein 25)*	Synaptic vesicle membrane docking and fusion is mediated by SNAREs (soluble N-ethylmaleimide-sensitive factor attachment protein receptors) located on the vesicle membrane (v-SNAREs) and the target membrane (t-SNAREs).	Synapse-related	NM_001291056.1 NM_011428.3	20614	GGGCAATAATCAGGATGGAG	TGTTACCCTGCGGATGAA
Syp *(Synaptophysin)*	This gene encodes an integral membrane protein of small synaptic vesicles in brain and endocrine cells.	Synapse-related	NM_009305.2	20977	GTAATCTGGTCAGTGAAGCC	GGGTGGAGACCTAGGATATG
Mef2c *(Myocyte Enhancer Factor 2C)*	This protein may play a role in maintaining the differentiated state of muscle cells. Plays an essential role in hippocampal-dependent learning and memory by suppressing the number of excitatory synapses and thus regulating basal and evoked synaptic transmission. Crucial for normal neuronal development, distribution, and electrical activity in the neocortex.	Regulates synapse formation and vocalization	NM_001347574.1 NM_001347567.1 NM_001347573.1 NM_001347575.1 NM_001347571.1 NM_001347564.1 NM_001347581.1 NM_001347572.1 NM_001347577.1 NM_001347580.1 NM_001347576.1 NM_001347566.1 NM_001347578.1 NM_001347579.1 NM_001170537.1	17260	CGATGCAGACGATTCAGTAG	GTGGAACAGCACACAATCTTT
Srpx2 *(Sushi Repeat Containing Protein, X-Linked 2)*	This gene encodes a secreted protein that contains three sushi repeat motifs. The encoded protein may play a role in the development of speech and language centers in the brain. This protein may also be involved in angiogenesis.	Regulates synapse formation and vocalization in mice	NM_001083895.3 NM_026838.4	68792	TTCCCTGTCGACGATGAT	ACCTGAGCCTGCGTACC
Cadm1 *(Cell Adhesion Molecule 1)*	Mediates homophilic cell-cell adhesion in a Ca(2+)-independent manner. Also mediates heterophilic cell-cell adhesion with CADM3 and NECTIN3 in a Ca(2+)-independent manner. Acts as a tumor suppressor in non-small-cell lung cancer (NSCLC) cells.	Related to dendritic spines, autism and vocalization	NM_001310841.1 NM_001025600.1 NM_207676.2 NM_018770.3 NM_207675.2	54725	ATCACAGTCCTGGTTCCTG	CATGGCAGTACAGTTGACTTC
Hprt *(Hypoxanthine Phosphoribosyl-transferase 1)*	The protein encoded by this gene is a transferase, which plays a central role in the generation of purine nucleotides through the purine salvage pathway.	Reference gene	NM_013556.2	15452	GGATTTGAATCACGTTTGTGTC	AACTTGCGCTCATCTTAGGC
Gapdh *(Glyceraldehyde-3-Phosphate Dehydrogenase)*	The product of this gene catalyzes an important energy-yielding step in carbohydrate metabolism, the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate in the presence of inorganic phosphate and nicotinamide adenine dinucleotide (NAD).	Reference gene	NM_008084.3	14433	CGGGTTCCTATAAATACGGAC	TCACCATTTTGTCTACGGG

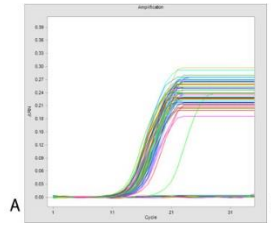
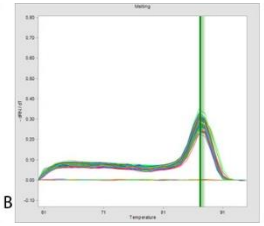
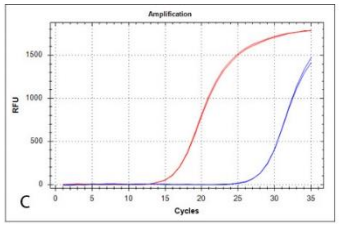
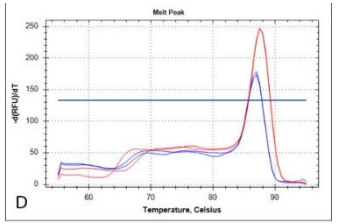
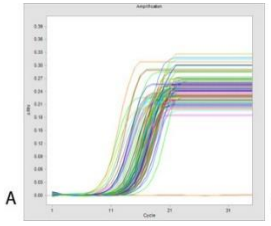
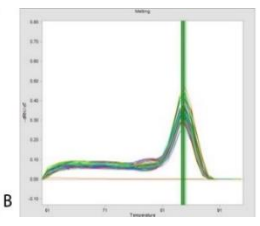
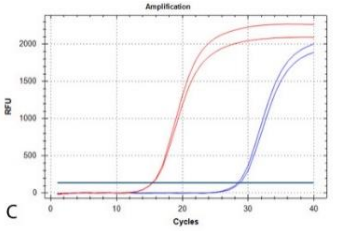
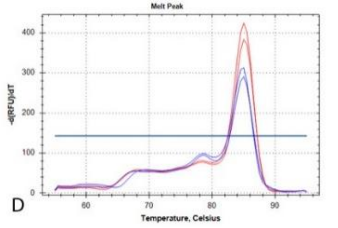
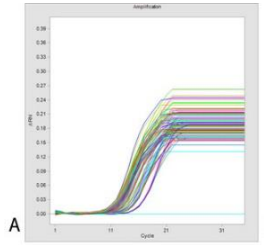
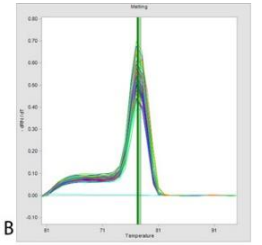
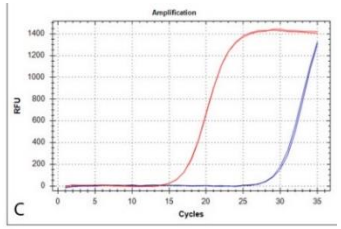
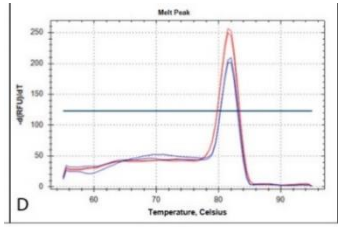
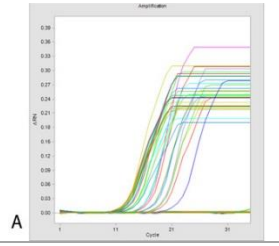
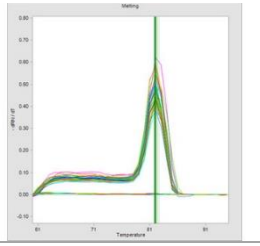
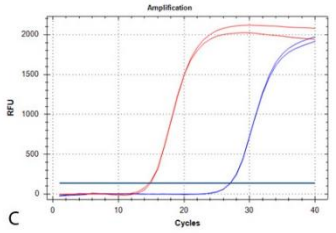
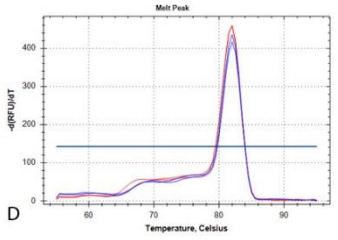
Part of the autism- and autophagy-related genes, as well as those chosen based on Affymetrix analyses and mouse/human RNA-seq were previously described in the following references: 2, 3, 6, 12, 13, 18, 34 (main text). Validation of the standard mRNA Assays for reliable performance at qPCR high-throughput BioMark instrument (Fluidigm). 93 standard mRNA assays were designed by us (Supplemental Table S1). Here we show the validation of assays for reliable preamplification and subsequent use for high-throughput qPCR instrument BioMark System (Fluidigm). Whole RNA samples were reverse transcribed by qScript cDNA Synthesis Kit (Quanta

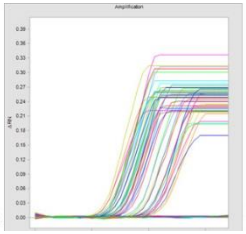
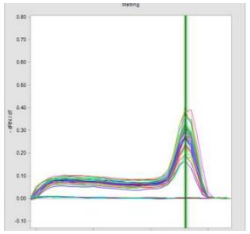
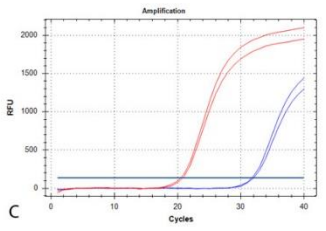
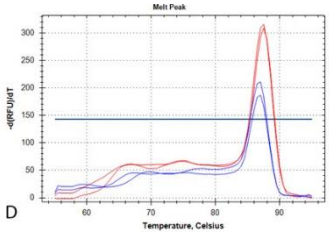
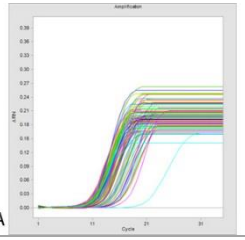
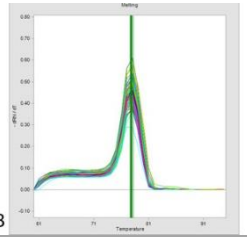
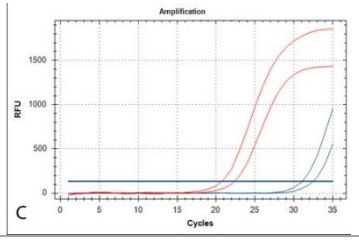
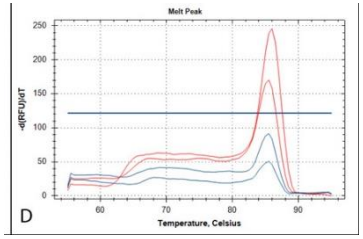
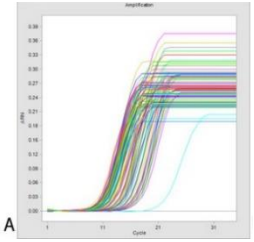
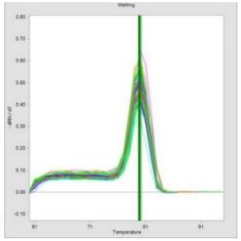
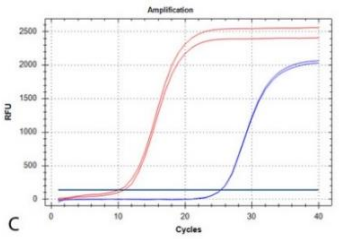
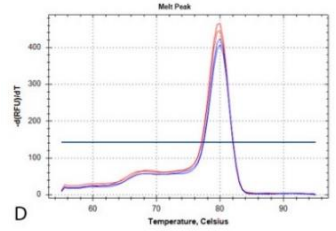
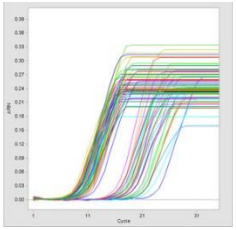
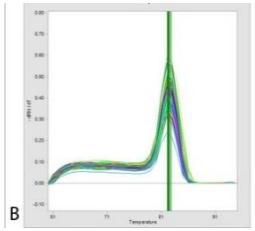
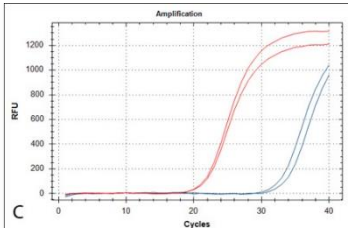
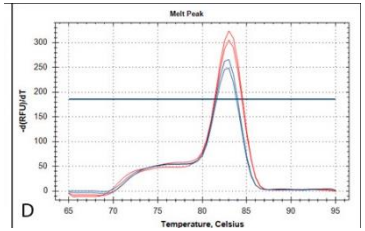
Biosciences, Gaithersburg, MD, USA). cDNA samples were diluted to 10 ng RNA/ul and preamplified by iQ Supermix (Bio-Rad) (see Material and Methods). Preamplified samples were diluted 10x.

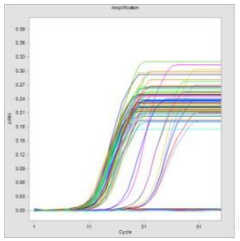
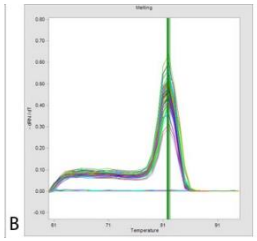
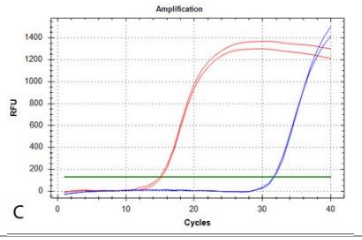
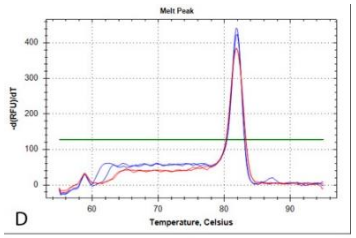
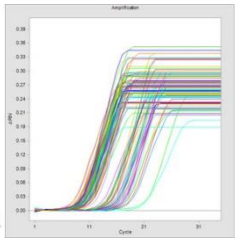
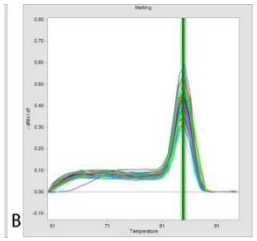
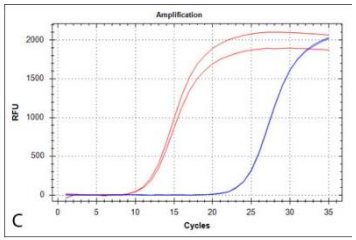
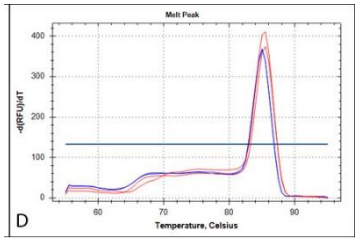
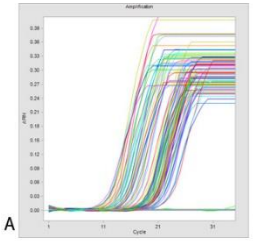
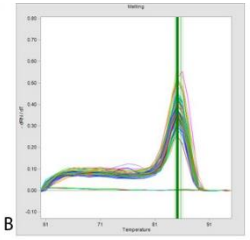
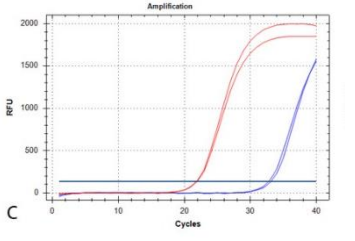
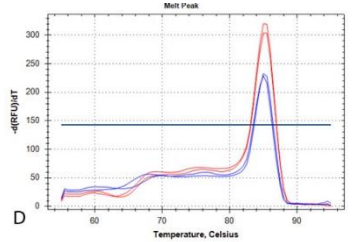
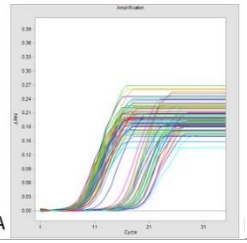
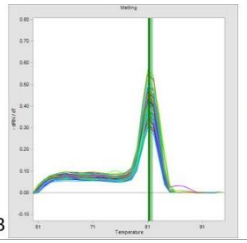
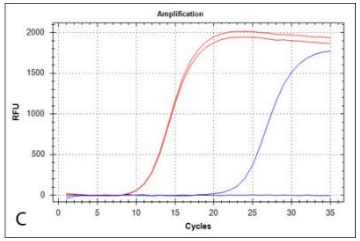
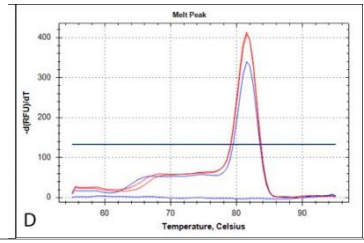
Table S4. Validation of preamplification.

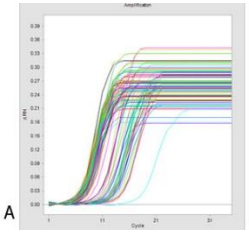
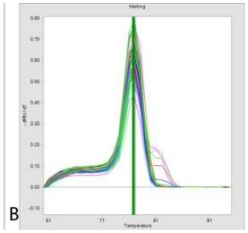
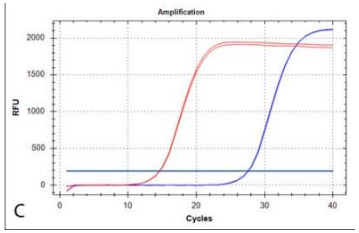
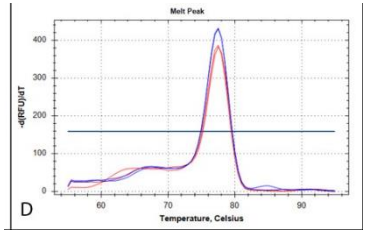
Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Abcf3				
Adnp				
Akt1				

Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Apoe				
Bmp4				
Cdh17				
Fpr-rs3				

Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Gm21949				
Hist1h3b				
Iba1 (Aif1)				
Kdm5d				

Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Klf1				
Lipa				
Mtor				
Nlgn2				

Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Pax6				
Per1				
Tubb1				
Wfs1				

Gene Name	Amplification Curve (pre-amplified)	Melting Curve (pre-amplified)	Pre-amplified sample versus non-preamplified sample (used for calculation of the quality of pre-amplification)	Melting curves (nonpreamplified and pre-amplified)
Hprt				

Selected assays performed in 3-month-old mice for *Adnp* and all genes (including the reference gene *Hprt*) shown in Fig. 4 (main text) are presented, as an example for all tested genes. The identical pre-amplified and non-preamplified sample was used for calculation of the quality of pre-amplification for each assay (1), and non-approved assays were not included in the analysis. The validation of mRNA assays was performed at CFX96 (Bio-Rad) and the results are listed below. The 10 µL qPCR reaction contained 2 µL of 5 ng/µl cDNA sample (either nonpreamplified cDNA diluted 5x or preamplified cDNA diluted 10x), 5 µL of Sso Fast SYBR green supermix (Bio-Rad), 0.5 µL of forward and reverse 10 µM primer mix (final concentration 500 nM) and 2.5 µL of RNAse free water. Thermal protocol was: 95°C 30 s, 40 cycles 95°C 5s, 60°C 15 s plus melting curve analysis.

Table S5. Significant fold-changes of the relative gene transcript expression affected by *Adnp* haploinsufficiency, NAP treatment, or sex in cortical, hippocampal, and splenic tissues during developmental period in 19-27-day-old animals. (Tables S6 and S7 are added as an attachment with STRING functional enrichment analysis for biological processes).

Tissue	Gene Symbol	Genotype Effect *Adnp*$^{+/-}$ vs. *Adnp*$^{+/+}$		NAP Treatment Effect *Adnp*$^{+/-}$ NAP vs. *Adnp*$^{+/-}$		Sex Effect Females vs. Males		
		Males	Females	Males	Females	*Adnp*$^{+/+}$	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
Cortex	*Adnp*	-1.93	-2.15					
	Adnp2			1.82				
	Akt1			1.54		1.39	1.55	
	Apoe			1.40				
	Bmp1			1.40				
	Cacna1e			1.85				
	Ccl5	-1.62						
	Crb2		1.69	2.52				
	Dbn1			1.66				
	Foxp1		-1.27					
	Gad1 (67)			2.18			2.09	
	Gdf15				-3.84			
	Gm21949			1.58			1.57	
	Hist1h3b		1.81				1.71	
	Mbp			1.48				
	Mtor			1.68			1.64	
	Myl2							-4.30
	Myl9			1.30				
	Nlgn1		-1.50					
	Nlgn2			1.76				
	Nlgn3			1.57				
	Per1			1.68				
	Psd95						1.72	
	Shank2			1.53			1.57	
	Shank3			1.84				
	Slc9a3			1.61				
	Sox5			1.40			1.46	
	Syp			2.24				
	Tgfa			1.72			1.82	
	Tsc1			1.77				

Tissue	Gene Symbol	Genotype Effect *Adnp*$^{+/-}$ vs. *Adnp*$^{+/+}$		NAP Treatment Effect *Adnp*$^{+/-}$ NAP vs. *Adnp*$^{+/-}$		Sex Effect Females vs. Males		
		Males	Females	Males	Females	*Adnp*$^{+/+}$	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
	Vglut1			1.62				
Hippocampus	*Abcf3*							-1.17
	Adnp		-1.86					
	Akt1							-1.24
	Ccl5				-1.82		1.65	-1.47
	Fpr-rs3	-2.05		1.92				
	Gdf15			3.13				-1.98
	Hjurp							-1.23
	Il-12a	1.62						
	Il1-r8				-1.29			
	Loc547349			5.27				
	Mndal			1.69				
	Msh5				3.82			
	Nlgn2							-1.27
	Nlgn3							-1.23
	Npvf	4.77				10.95		
	Nr4a2							-1.49
	Olfr1347	-2.17						
	Tnfa	2.60	2.89	1.84				-2.36
	Tubb1		2.47		-3.16			
Spleen	*Adnp*		-2.89		1.91		-1.79	
	Adnp2	2.66					-2.58	
	Apoe				1.71			2.91
	Bmp4				3.86			
	Ccl5		1.98					
	Cd96						2.49	3.29
	Cd154					2.46		
	Eif4e				1.91			
	Foxp1							2.05
	Mef2c					1.58		

Unpaired student's t-tests between vehicle-treated *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice, between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice, and between male and female mice (males: *Adnp*$^{+/+}$ N=5; *Adnp*$^{+/-}$ N=5; *Adnp*$^{+/-}$ NAP, N=5, females: *Adnp*$^{+/+}$ N=6; *Adnp*$^{+/-}$ N=4; *Adnp*$^{+/-}$

NAP, N=5) were performed. Statistically significant genotype, treatment, and sex effects are presented as fold-changes of the level of relative gene expression. Upregulated genes are presented as plus fold changes, whereas downregulated genes are presented as minus values. Yellow-highlighted genes indicate significant gene expression differences observed in both *Adnp* haploinsufficient model and NAP treatment. Green-highlights indicate significant gene expression differences observed in more than one tissue. Tables S6 and S7 (excel sheets) depict mouse and human functional enrichment analyses (STRING functional enrichment tool, performed on the transcripts listed in Table S5).

Table S8. Significant fold-changes of the relative gene transcript expression affected by ADNP haploinsufficiency, NAP treatment, or sex, in cortical, hippocampal, and splenic tissues in 3-month-old animals. (Tables S9 and S10 are added as an attachment with STRING functional enrichment analysis for biological processes).

Tissue	Gene Symbol	Genotype Effect *Adnp*$^{+/-}$ vs. *Adnp*$^{+/+}$		NAP Treatment Effect *Adnp*$^{+/-}$ NAP vs. *Adnp*$^{+/-}$		Sex Effect Females vs. Males		
		Males	Females	Males	Females	*Adnp*$^{+/+}$	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
Cortex	*Adnp*		-1.57					
	Akt3				1.35			
	Cd96							3.34
	Foxp1				-1.26			
	Fpr-rs3		-2.54					
	Hist1h3b		-1.43		1.91			
	Hsd17b2				1.46			1.65
	Iba1						1.25	
	Il-6	3.69				2.38	-1.88	
	Mecp2						-1.26	
	Mtor	1.45						
	Myl9		1.30			-1.37		
	Nts		-1.27					
	Shank2	1.39						
	Slc12a2	1.45						
	Tubb1				3.24			
Hippocampus	*Acvr1c*	2.01						
	Adnp			-1.35				
	Akap6	1.69						
	Akt3						-1.60	
	Apoe	1.63		-1.48				
	Caspr2			-1.58				
	Chat				6.55			5.84
	Chl1			-1.70				
	Crb2			-1.82				
	Dbn1	1.89						
	Foxp1	1.72						
	Foxp2		3.25					
	Fpr-rs3						2.89	
	Gdf15				3.70	3.81		

Tissue	Gene Symbol	Genotype Effect *Adnp*$^{+/-}$ vs. *Adnp*$^{+/+}$		NAP Treatment Effect *Adnp*$^{+/-}$ NAP vs. *Adnp*$^{+/-}$		Sex Effect Females vs. Males		
		Males	Females	Males	Females	*Adnp*$^{+/+}$	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
	Gm21949	2.12		-1.83				
	Hist1h3b	1.92			1.83			
	Hsd17b2	2.22						
	Lipa	1.99		-1.65				
	Mac-2						-1.60	
	Mef2C							-1.74
	Mndal	2.16				2.33		
	Nts							1.73
	Nlgn2	2.01		-1.95				
	Nlgn3			-1.83				
	Nr4a2	1.84					-2.00	
	Olfr1347	3.62						
	Pax6	1.99		-2.21				
	Psd95			-2.59				
	Shank3			-2.00				
	Slc6a4				-2.53			
	Snap25						-1.44	
	Tgfa			-1.91				
	Vglut1			-1.57				
	Wfs1	1.75		-1.95				
Spleen	*Abcf3*	1.93		-2.46				
	Adnp		1.76					2.13
	Akap6					-8.13		
	Akt1		2.17	-2.72	-1.58			2.08
	Bmp4	3.02		-3.00				
	Ccl5		1.54					-1.61
	Cdh17	2.87		-4.25				3.93
	Ddx3y			-1.78				
	Fpr-rs3		3.77					
	Gdf15		5.87					3.63
	Hist1h3b			-3.64				2.78
	Hjurp		1.94	-3.59				2.50
	Iba1		1.52		-1.57			
	Ifng		3.18					
	Il1b			-1.86				
	Kdm5d	2.76		-2.40				

Tissue	Gene Symbol	Genotype Effect *Adnp*$^{+/-}$ vs. *Adnp*$^{+/+}$		NAP Treatment Effect *Adnp*$^{+/-}$ NAP vs. *Adnp*$^{+/-}$		Sex Effect Females vs. Males		
		Males	Females	Males	Females	*Adnp*$^{+/+}$	*Adnp*$^{+/-}$	*Adnp*$^{+/-}$ NAP
	Klf1	2.91		-5.12				
	Mecp2							1.91
	Mtor		1.95	-2.54	-1.71			
	Myl9			-3.02				2.28
	Nlgn1		7.09			-5.51		
	Nlgn2			-5.57				
	Olfr1347		3.23					3.23
	Per1	2.66		-2.30				
	Psd95				2.93			
	Slc6a4			-4.57				3.68
	Sox5			-2.41				
	Tubb1							2.76
	Wfs1			-1.72				

Unpaired student's t-tests between vehicle-treated *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice, between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice, and between male and female mice (males: *Adnp*$^{+/+}$ N=3; *Adnp*$^{+/-}$ N=4; *Adnp*$^{+/-}$ NAP, N=4, females: *Adnp*$^{+/+}$ N=6; *Adnp*$^{+/-}$ N=7; *Adnp*$^{+/-}$ NAP, N=8) were performed. Statistically significant genotype, treatment, and sex effects are presented as fold-changes of the level of relative gene transcript expression. Upregulated genes are presented as plus fold changes, whereas downregulated genes are presented as minus values. Yellow-highlighted genes indicate significant gene expression differences observed in both *Adnp* haploinsufficient model and NAP treatment. Green-highlights indicate significant gene expression differences observed in more than one tissue. Tables S9 and S10 (excel sheets) depict mouse and human functional enrichment analyses (STRING functional enrichment tool, performed on the genes listed in Table S8).

Table S13. Significant fold-changes of the relative expression of gene transcripts comparing 19-27-day-old mice and 3-month-old mice. (Tables S14 and S15 are added as an attachment with STRING functional enrichment analysis for biological processes).

Tissue	Gene Symbol	Age effect (19-27-day-old vs. 3-month-old mice)					
		Adnp$^{+/+}$		*Adnp*$^{+/-}$		*Adnp*$^{+/-}$ NAP	
		Males	Females	Males	Females	Males	Females
Cortex	*Acvr1c*		1.53	2.01	1.60	1.84	
	Adnp		-1.39				
	Adnp2			2.08			
	Akt1			1.61			
	Becn1			1.38		1.52	
	Bmp1		-1.62				
	Bmp4	-1.82	-1.62	-1.44	-1.71		
	Ccl5				-2.04		-1.66
	Crb2	-2.21					
	Dbn1			1.80			
	Foxp1	-1.48					
	Fpr-rs3			-6.14		-4.05	
	Gdf15		-4.27	-13.19	-4.31		
	Hist1h3b				-2.57		
	Hjurp			1.85		2.09	
	Hmx3						-2.30
	Hsd17b2		2.07		3.95		5.09
	Il1b	-2.64	-5.39	-3.37	-4.65	-2.81	-3.23
	Il-6		3.16	3.92	2.45		
	Lipa	-1.59					
	Masp1		-1.56		-1.35		
	Mbp	-2.20	-2.08	-1.89	-1.89	-1.95	
	Mndal		-1.66	-2.29	-1.88	-1.78	
	Msh5			-4.54		-9.06	
	Mtor			1.63			
	Myl2						4.37
	Nts	-2.19					
	Nlgn1				1.41	1.59	
	Nlgn2			1.89			
	Olfr1347			-5.85	-4.47		
	Pax6					1.51	
	Per1			1.60			

Tissue	Gene Symbol	Age effect (19-27-day-old vs. 3-month-old mice)					
		Adnp$^{+/+}$		*Adnp*$^{+/-}$		*Adnp*$^{+/-}$ NAP	
		Males	**Females**	**Males**	**Females**	**Males**	**Females**
	Psd95			2.36		1.70	2.52
	Shank2			1.41			
	Shank3			1.74			
	Slc12a2	-1.86	-1.60		-1.33		
	Slc9a3				-1.54		
	Snap25		1.38	1.84	1.81	1.97	
	Sox5			2.22		1.77	
	Srpx2			1.99			
	Tgfa			2.12			1.64
	Tnfrsf1 1b	1.67	2.17	2.10	1.89	2.63	2.44
	Vglut1		-1.42		-1.45		
Hippocampus	*Abcf3*					1.81	
	Adnp2					1.80	
	Akap6	1.74				2.36	1.85
	Akt1					1.58	
	Apoe	1.84				1.97	1.47
	Bmp1	1.84				1.89	
	Bmp4	6.27	8.23	3.64	4.30	4.88	4.01
	Caspr2					1.47	
	Ccl5		1.68		2.10	2.02	
	Chat	11.18	13.24	5.55			
	Chl1					1.72	
	Crb2					2.78	1.86
	Dbn1					2.03	
	Eif4e						-1.34
	Foxp2	4.93	8.45	4.43			
	Fpr-rs3	4.20	3.43	3.89		3.12	
	Gad1 (67)					2.65	2.05
	Gdf15	13.88	2.33			3.96	
	Glut					2.21	1.84
	Gm21949	2.34				3.07	1.97
	Hist1h3b	4.03	2.12	1.93	2.56	2.38	
	Hmx3				6.11		
	Il-12a			-1.55			
	Il1b		5.13		4.10	6.67	
	Il-6				-2.09		

Tissue	Gene Symbol	Age effect (19-27-day-old vs. 3-month-old mice)					
		Adnp$^{+/+}$		*Adnp*$^{+/-}$		*Adnp*$^{+/-}$ NAP	
		Males	**Females**	**Males**	**Females**	**Males**	**Females**
	Lipa	1.81				1.75	1.39
	Mac-2			-1.97			
	Masp1	1.85	2.82			1.58	
	Mbp	2.59	3.10	1.58	2.43	2.83	2.32
	Mecp2	2.00	2.46		1.81	2.34	1.95
	Mndal					2.69	2.40
	Msh5					7.97	5.73
	Mtor					1.75	
	Myl2	2.00					
	Myl9	1.96				2.36	1.74
	Nts		1.72		1.91	2.29	
	Nlgn2					1.81	
	Nlgn3	1.97				2.50	1.59
	Olfr1347	4.38	2.39				
	Pax6					1.98	
	Shank2					1.94	1.67
	Shank3					2.48	
	Slc12a2	2.13			1.99	2.16	1.79
	Slc9a3	4.40	6.53	2.34	2.86	7.58	4.29
	Snap25			-1.73			-1.34
	Srpx2	3.39	3.55				
	Syp	2.73				3.19	1.96
	Tgfa					1.84	
	Vglut1					2.01	1.87
	Wfs1					2.51	
Spleen	*Abcf3*			-2.31	-2.63		-1.55
	Adnp		-1.91	-4.52	-9.71	-3.53	-4.91
	Adnp2	-2.52	-3.57		-3.79		-1.90
	Akap6		3.55				
	Akt1				-2.73		
	Akt3			-2.01			
	Apoe			-2.43	-2.77	-2.77	
	Becn1		-2.17	-2.22	-2.99	-2.18	-2.72
	Bmp4			-2.68	-5.64		
	Ccl5						1.79
	Chat						4.22
	Dbn1						1.88

Tissue	Gene Symbol	Age effect (19-27-day-old vs. 3-month-old mice)					
		Adnp$^{+/+}$		*Adnp*$^{+/-}$		*Adnp*$^{+/-}$ NAP	
		Males	Females	Males	Females	Males	Females
	Eif4e		-1.30	-1.72	-1.93		
	Foxp1					-1.86	
	Fpr-rs3		7.90	5.30		9.85	
	Gdf15	26.14	7.47	6.39		18.31	
	Glut				-3.37		
	Il1b		2.20			2.19	4.14
	Mac-2	-3.44	-1.99	-4.14	-3.05		-6.05
	Mecp2				-3.08		
	Mef2c				-1.53		
	Mndal		1.36				1.75
	Msh5					4.56	7.31
	Mtor				-2.31		
	Nts		3.89				4.72
	Nlgn1		4.52				
	Nlgn2				-4.37		
	Olfr1347		4.84	12.34		8.09	5.42
	Per1			-2.08	-4.51		
	Shank3		-3.45	-3.71			
	Slc12a2		-1.96		-1.95		
	Slc9a3		-2.06	-3.03	-3.94		-3.15
	Snap25	8.07					
	Sox5			-3.49	-4.29		
	Syp		4.15			5.57	4.36
	Tnfrsf1 1b				-2.48		
	Tubb1						-2.55
	Wfs1			-3.13	-2.58		

Unpaired student's t-tests in vehicle-treated *Adnp*$^{+/+}$, *Adnp*$^{+/-}$, and NAP-treated *Adnp*$^{+/-}$ 19-27-day-old mice compared with 3-month-old mice (19-27-day-old mice: males: *Adnp*$^{+/+}$ N=5; *Adnp*$^{+/-}$ N=5; *Adnp*$^{+/-}$ NAP, N=5, females: *Adnp*$^{+/+}$ N=6; *Adnp*$^{+/-}$ N=4; *Adnp*$^{+/-}$ NAP, N=5. 3-month-old mice: males: *Adnp*$^{+/+}$ N=3; *Adnp*$^{+/-}$ N=4; *Adnp*$^{+/-}$ NAP, N=4, females: *Adnp*$^{+/+}$ N=6; *Adnp*$^{+/-}$ N=7; *Adnp*$^{+/-}$ NAP, N=8). Statistically significant age effect is presented as a fold-change of the level of relative gene expression for each group and sex. Upregulated genes are presented as plus fold changes, whereas downregulated genes are presented as minus values. Green-highlights

indicate significant gene expression differences observed in more than one tissue. Tables S14 and S15 (excel sheets) depict mouse and human functional enrichment analyses (STRING functional enrichment tool, performed on the genes listed in Table S13).

Supplemental Figures:

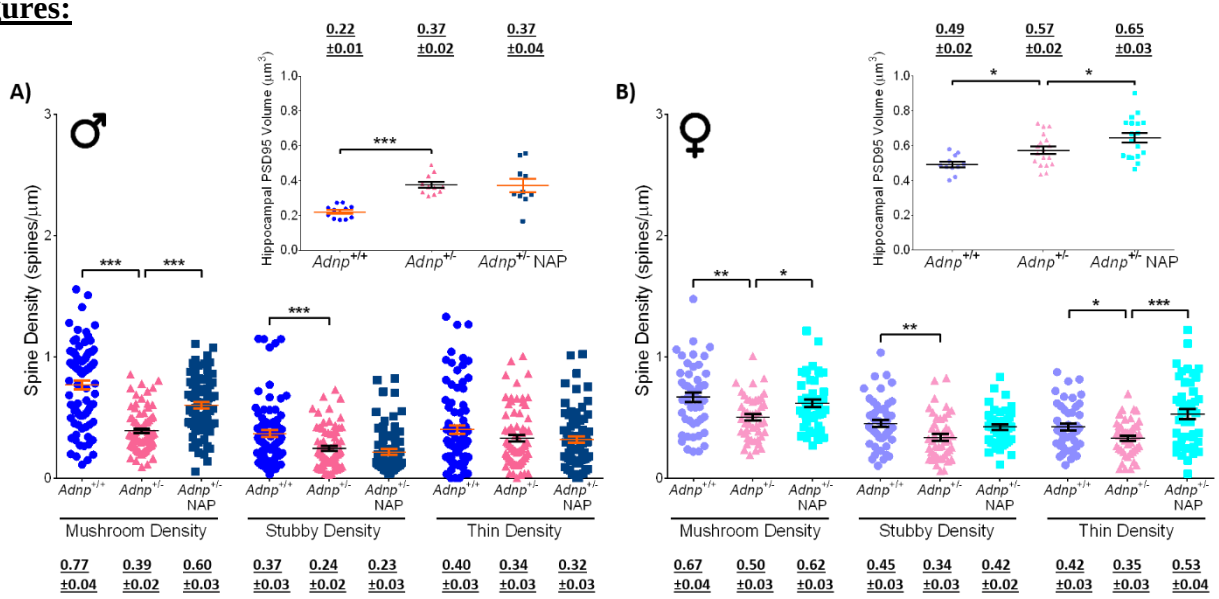


Fig. S1. In the hippocampus, *Adnp*$^{+/-}$ mice display significant decreased mushroom, stubby and thin spine density, as compared to *Adnp*$^{+/+}$ mice, coupled with increased PSD95 volume: amelioration by NAP treatment.

Average density of different dendritic spine subtypes (mushroom, stubby, and thin) is presented (males: *Adnp*$^{+/+}$ N=83-84; *Adnp*$^{+/-}$ N=74-75; *Adnp*$^{+/-}$ NAP, N=72-73, females: *Adnp*$^{+/+}$ N=47-48; *Adnp*$^{+/-}$ N=44-45; *Adnp*$^{+/-}$ NAP, N=44-45 dendrites/experimental group). Average hippocampal PSD95 volume (males: *Adnp*$^{+/+}$ N=12; *Adnp*$^{+/-}$ N=11; *Adnp*$^{+/-}$ NAP, N=10, females: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/-}$ N=18; *Adnp*$^{+/-}$ NAP, N=18 dendrites/experimental group) was significantly increased in *Adnp*$^{+/-}$ mice of both sexes, and further increased by NAP treatment in females. Two-way ANOVA with Tukey post hoc test was performed. Underlined numbers beneath and over the graphs represent mean (±SEM) values. **(A)** In males, for mushroom spine density, main genotype ($F(1,290)=71.620$, $p<0.001$), treatment ($F(1,290)=8.474$, $p=0.004$), and interaction ($F(1,290)=17.294$, $p<0.001$) effects were found. For stubby spine density, main genotype ($F(1,289)=13.192$, $p<0.001$) and treatment ($F(1,289)=5.514$, $p=0.020$) effects were found. For PSD95 volume (inset graph), main genotype effect was found ($F(1,38)=32.485$, $p<0.001$). Significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (***$p<0.001$), and between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice (***$p<0.001$) were observed. **(B)** In females, for mushroom spine density, main genotype ($F(1,183)=11.530$, $p<0.001$) and treatment ($F(1,183)=4.050$, $p=0.046$) effects were found. For stubby spine density, main genotype effect was found ($F(1,181)=8.627$, $p=0.004$). For thin spine density, main treatment ($F(1,181)=4.722$, $p=0.031$) and interaction ($F(1,181)=19.449$, $p<0.001$) effects were found. For PSD95 volume (inset graph), main genotype ($F(1,58)=9.322$, $p=0.003$) and treatment ($F(1,61)=9.151$, $p=0.004$) effects were found. Significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (*$p<0.05$, **$p<0.01$), and between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice (*$p<0.05$, ***$p<0.001$) were observed. Scale bar: 2 µm.

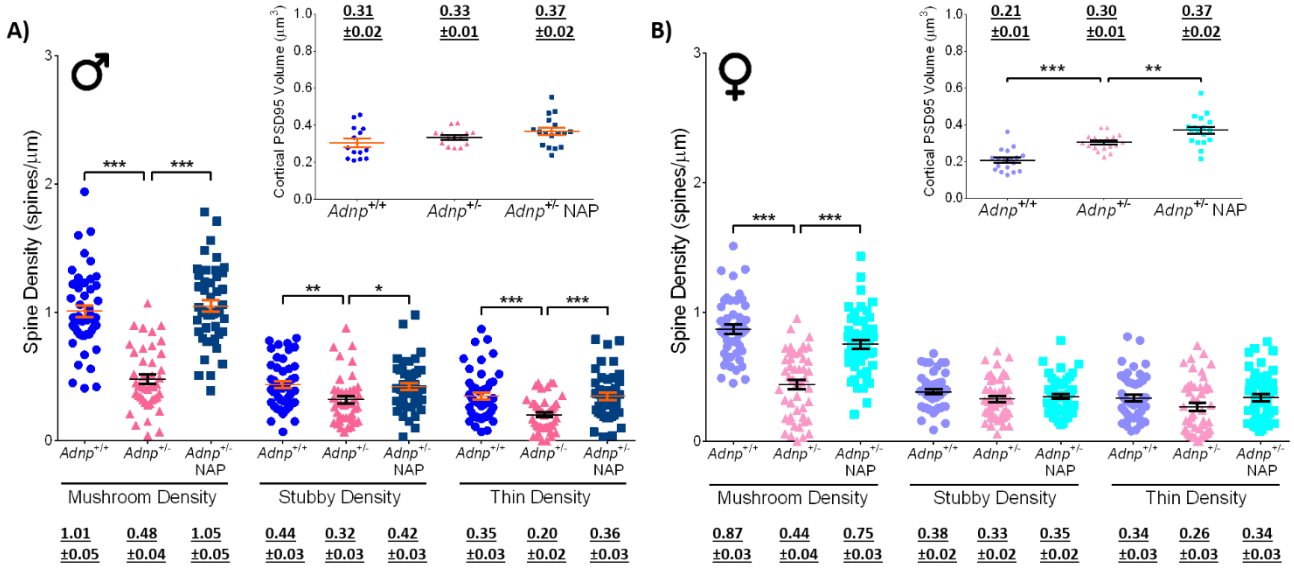


Fig. S2. In the cortex, male *Adnp*$^{+/-}$ mice display significant decreased mushroom, stubby and thin spine density, whereas females present changes in mushroom density only. NAP treatment ameliorates. Female *Adnp*$^{+/-}$ mice also display increased PSD95 volume, further increased by NAP.

Average density of different dendritic spine subtypes (mushroom, stubby, and thin) is presented (males: *Adnp*$^{+/+}$ N=46-47; *Adnp*$^{+/-}$ N=43; *Adnp*$^{+/-}$ NAP, N=44-45, females: *Adnp*$^{+/+}$ N=47; *Adnp*$^{+/-}$ N=47; *Adnp*$^{+/-}$ NAP, N=49 dendrites/experimental group). Average cortical PSD95 volume (males: *Adnp*$^{+/+}$ N=14; *Adnp*$^{+/-}$ N=14; *Adnp*$^{+/-}$ NAP, N=17, females: *Adnp*$^{+/+}$ N=18; *Adnp*$^{+/-}$ N=18; *Adnp*$^{+/-}$ NAP, N=18 dendrites/experimental group) was significantly increased in female *Adnp*$^{+/-}$ mice, and further increased by NAP treatment. Two-way ANOVA with Tukey post hoc test was performed. Underlined numbers beneath and over the graphs represent mean (±SEM) values. **(A)** In males, for mushroom spine density, main genotype ($F(1,178)=17.707$, $p<0.001$), treatment ($F(1,178)=26.348$, $p<0.001$), and interaction ($F(1,178)=63.039$, $p<0.001$) effects were found. For stubby spine density, main interaction effect was found ($F(1,175)=11.172$, $p=0.001$). For thin spine density, main genotype ($F(1,177)=6.218$, $p=0.014$), treatment ($F(1,177)=5.814$, $p=0.017$), and interaction ($F(1,177)=8.616$, $p=0.004$) effects were found. Significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (**p<0.01, ***p<0.001), and between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice (*p<0.05, ***p<0.001) were observed. **(B)** In females, for mushroom spine density, main genotype ($F(1,188)=85.518$, $p<0.001$), treatment ($F(1,188)=35.742$, $p<0.001$), and interaction ($F(1,188)=8.427$, $p=0.004$) effects were found. For PSD95 volume (inset graph), main genotype ($F(1,68)=37.581$, $p<0.001$) and treatment ($F(1,68)=21.971$, $p<0.001$) effects were found. Significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (***p<0.001), and between NAP- and vehicle-treated *Adnp*$^{+/-}$ mice (**p<0.01, ***p<0.001) were observed. Scale bar: 2 µm.

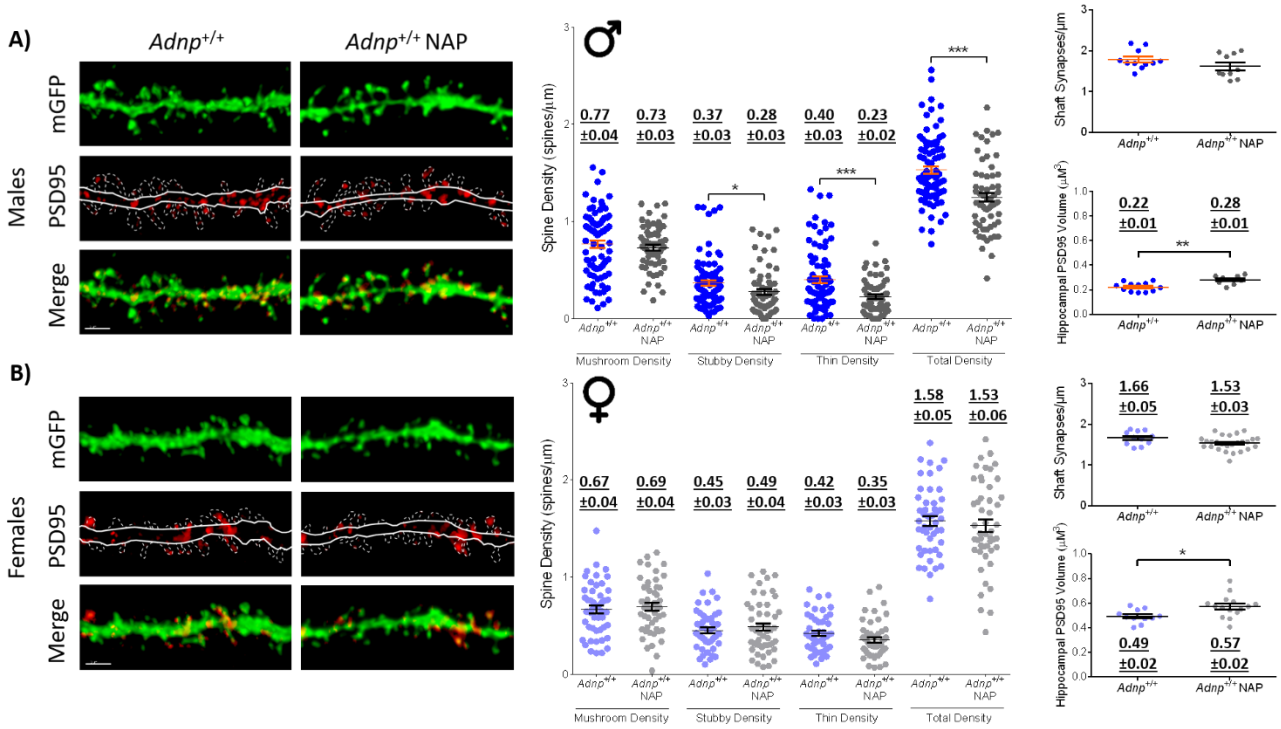


Fig. S3. In the hippocampus, NAP-treated male *Adnp*$^{+/+}$ mice display significant decreased dendritic spine density, without affecting mushroom spine density or shaft synapse density, coupled to increased PSD95 volume in both sexes.
Average density of different dendritic spine subtypes (mushroom, stubby, and thin), as well as total spine density is presented (males: *Adnp*$^{+/+}$ N=83-84; *Adnp*$^{+/+}$ NAP, N=62-63, females: *Adnp*$^{+/+}$ N=47-48; *Adnp*$^{+/+}$ NAP, N=49 dendrites/experimental group). Shaft synapse density was not affected by NAP treatment in *Adnp*$^{+/+}$ mice (males: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=10, females: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=26 dendrites/experimental group). Average hippocampal PSD95 volume was significantly increased by NAP treatment in *Adnp*$^{+/+}$ mice of both sexes (males: *Adnp*$^{+/+}$ N=12; *Adnp*$^{+/+}$ NAP, N=9, females: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=15 dendrites/experimental group). Two-way ANOVA with Tukey post hoc test was performed. Underlined numbers over the graphs represent mean (±SEM) values. **(A)** In males, for total spine density, main genotype ($F(1,290)=62.278$, $p<0.001$) and interaction ($F(1,290)=31.385$, $p<0.001$) effects were found. For mushroom spine density, main genotype ($F(1,290)=71.620$, $p<0.001$), treatment ($F(1,290)=8.474$, $p=0.004$), and interaction ($F(1,290)=17.294$, $p<0.001$) effects were found. For stubby spine density, main genotype ($F(1,289)=13.192$, $p<0.001$) and treatment ($F(1,289)=5.514$, $p=0.020$) effects were found. For thin spine density, main treatment ($F(1,290)=9.848$, $p=0.002$) and interaction ($F(1,290)=7.920$, $p=0.005$) effects were found. For PSD95 volume, main genotype effect was found ($F(1,38)=32.485$, $p<0.001$). Significant differences between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice (*$p<0.05$, **$p<0.01$, ***$p<0.001$) were observed. **(B)** In females, no significant differences were found for any spine subtype or shaft synapse density. For PSD95 volume, main genotype ($F(1,58)=9.322$, $p=0.003$) and treatment ($F(1,58)=9.151$, $p=0.004$) effects were found. Significant differences between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice (*$p<0.05$) were observed. **(A-B)** *Adnp*$^{+/+}$ is reshown in Figure 1A-B. Scale bar: 2 µm.

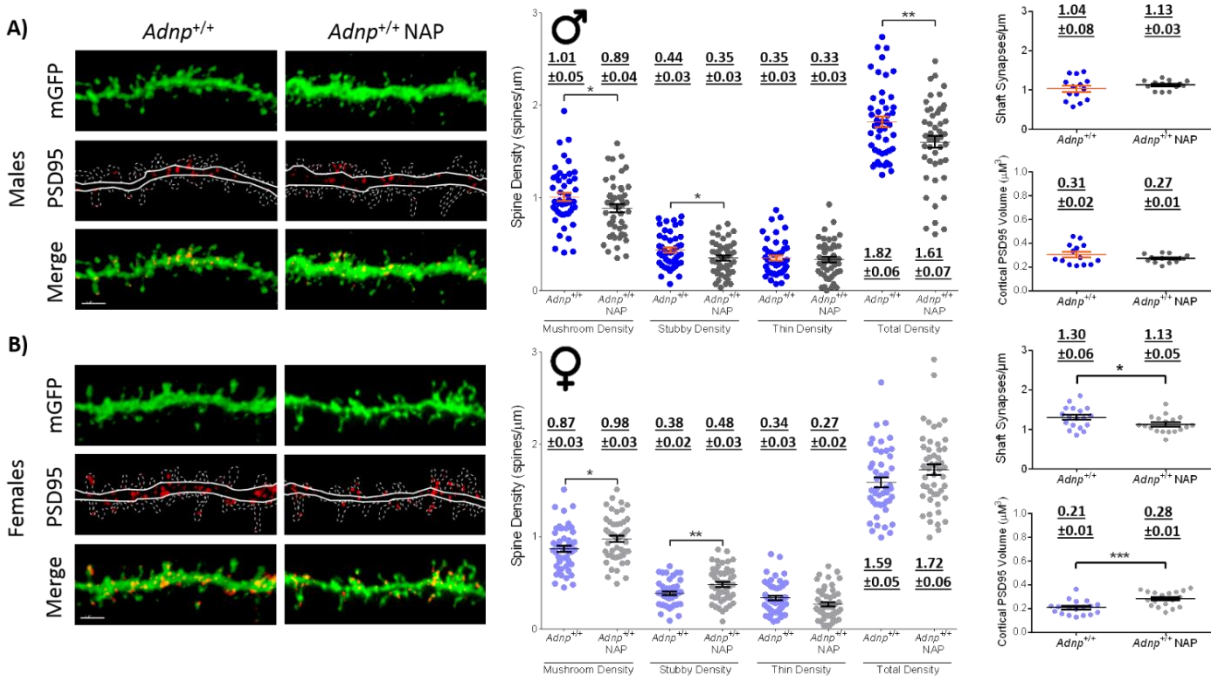
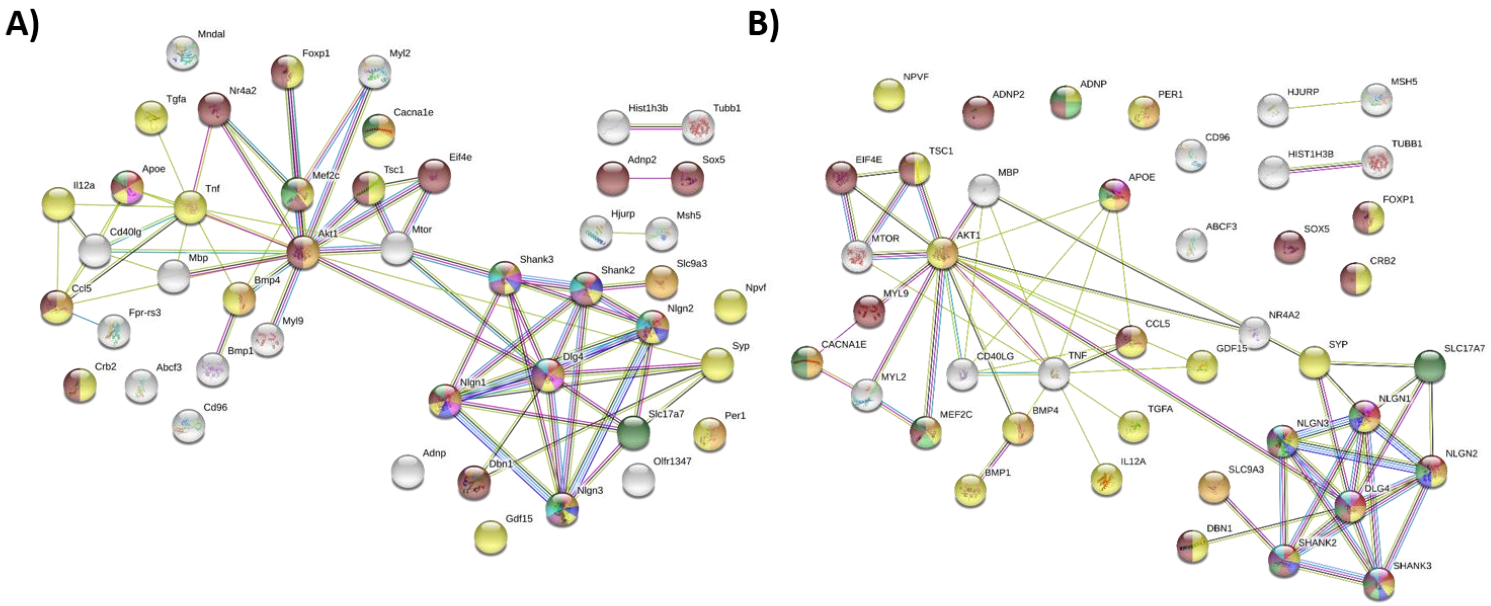


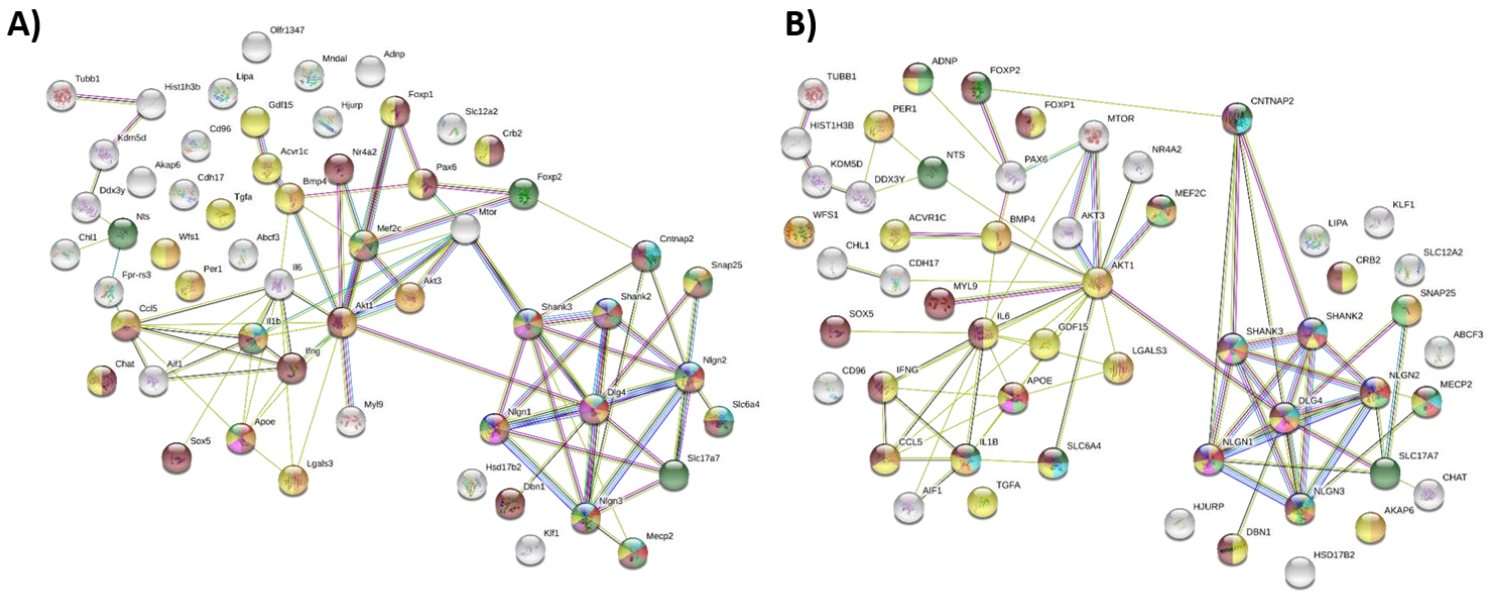
Fig. S4. In the cortex, NAP-treated *Adnp*$^{+/+}$ mice display altered spine density, with females displaying decreased shaft synapse density, coupled to increased PSD95 volume.

Average density of different dendritic spine subtypes (mushroom, stubby, and thin), as well as total spine density is presented (males: *Adnp*$^{+/+}$ N=46-47; *Adnp*$^{+/+}$ NAP, N=45-47, females: *Adnp*$^{+/+}$ N=47; *Adnp*$^{+/+}$ NAP, N=49 dendrites/experimental group). Shaft synapse density was not affected by NAP treatment in male *Adnp*$^{+/+}$ mice and was decreased in female NAP-treated *Adnp*$^{+/+}$ mice (males: *Adnp*$^{+/+}$ N=14; *Adnp*$^{+/+}$ NAP, N=14, females: *Adnp*$^{+/+}$ N=18; *Adnp*$^{+/+}$ NAP, N=18 dendrites/experimental group). Average cortical PSD95 volume was not affected by NAP treatment in male *Adnp*$^{+/+}$ mice and was increased in female NAP-treated *Adnp*$^{+/+}$ mice (Males: *Adnp*$^{+/+}$ N=14; *Adnp*$^{+/+}$ NAP, N=14, Females: *Adnp*$^{+/+}$ N=18; *Adnp*$^{+/+}$ NAP, N=18 dendrites/experimental group). Two-way ANOVA with Tukey post hoc test was performed. Underlined numbers over the graphs represent mean (±SEM) values. **(A)** In males, for total spine density, main genotype ($F(1,178)=26.892$, $p<0.001$), treatment ($F(1,178)=29.250$, $p<0.001$) and interaction ($F(1,178)=82.876$, $p<0.001$) effects were found. For mushroom spine density, main genotype ($F(1,178)=17.707$, $p<0.001$), treatment ($F(1,178)=26.348$, $p<0.001$), and interaction ($F(1,178)=63.039$, $p<0.001$) effects were found. For stubby spine density, main interaction effect was found ($F(1,175)=11.172$, $p=0.001$). Significant differences between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice (*$p<0.05$, **$p<0.01$) were observed. **(B)** In females, for mushroom spine density, main genotype ($F(1,188)=85.518$, $p<0.001$), treatment ($F(1,188)=35.742$, $p<0.001$), and interaction ($F(1,188)=8.427$, $p=0.004$) effects were found. For stubby spine density, main genotype ($F(1,188)=17.509$, $p<0.001$) and treatment ($F(1,188)=6.653$, $p=0.011$) effects were found. For shaft synapse density, main treatment effect was found ($F(1,67)=12.743$, $p<0.001$). For PSD95 volume, main genotype ($F(1,68)=37.581$, $p<0.001$) and treatment ($F(1,68)=21.971$, $p<0.001$) effects were found. Significant differences between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice (*$p<0.05$, **$p<0.01$, ***$p<0.001$) were observed. **(A-B)** *Adnp*$^{+/+}$ is reshown in Figure 2A-B. Scale bar: 2 µm.



Biological Process color legend	mouse	human
Synapse assembly	1.80E-08	4.07E-08
Positive regulation of synaptic transmission, glutamatergic	1.56E-07	1.41E-07
Regulation of synapse organization	1.24E-05	8.48E-07
Regulation of cell communication	2.71E-07	6.72E-08
AMPA glutamate receptor clustering	8.37E-08	3.02E-08
Learning or memory	0.000255	2.64E-06
Social behavior	5.62E-06	0.0003
Regulation of ion transport	3.10E-08	5.59E-08
Vocalization behavior	1.77E-06	4.85E-06
Nervous system development	6.05E-07	1.83E-06

Fig. S5. Function enrichment and network analysis in 19-27-day-old mice.
STRING protein-protein interaction network (2) (https://string-db.org) was performed for the genes listed in Table S5, compared to either mouse **(A)** or human database **(B)**. Enriched biological processes were marked on network according to color legend.



Biological Process color legend	mouse	human
Synapse assembly	9e-11	1.79e-09
Positive regulation of synaptic transmission, glutamatergic	9.86E-08	1.36E-07
Regulation of synapse organization	4.78E-08	3.38E-09
Regulation of cell communication	4.78e-08	3.34e-08
AMPA glutamate receptor clustering	4.28e-08	1.38e-08
Learning or memory	9.17e-11	1.47e-11
Social behavior	4.18e-12	3.54e-10
Regulation of ion transport	9e-11	4.44e-10
Vocalization behavior	1.54E-08	5.12E-08
Nervous system development	1.82e-09	3.18e-10

Fig. S6. Function enrichment and network analysis in 3-month-old mice.
STRING protein-protein interaction network (2) (https://string-db.org) was performed for the genes listed in Table S8, compared to either mouse **(A)** or human database **(B)**. Enriched biological processes were marked on network according to color legend.

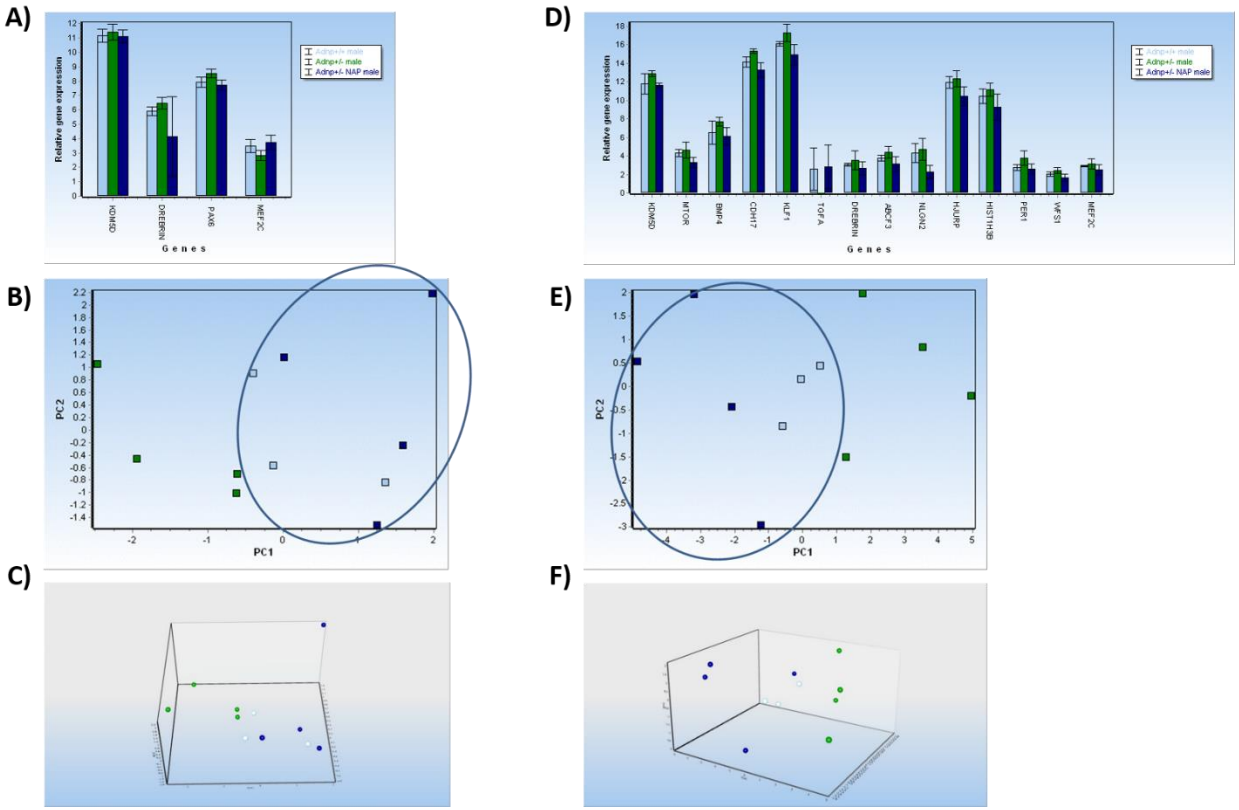


Fig. S7. Principal Component Analysis (PCA) of selected genes in 3-month-old male hippocampus and spleen.
High-throughput quantitative real-time PCR was performed on mRNA extracted from hippocampus, cortex, and spleen of 3-month-old male mice (*Adnp*$^{+/+}$ N=3; *Adnp*$^{+/-}$ N=4; *Adnp*$^{+/-}$ NAP, N=4). Results are shown as relative expression units. **(A)** Relative expression of genes displaying good separation of groups in male hippocampus. **(B-C)** PCA based on selected male hippocampal genes from figure S8A. Dark blue group of samples (*Adnp*$^{+/-}$ NAP) is clustered with light blue group (*Adnp*$^{+/+}$), but not with green group of samples (*Adnp*$^{+/-}$). **(D)** Relative expression of genes displaying good separation of groups in male spleen. **(E-F)** PCA based on selected male splenic genes from figure S8D. Dark blue group of samples (*Adnp*$^{+/-}$ NAP) is clustered with light blue group (*Adnp*$^{+/+}$), but not to green group of samples (*Adnp*$^{+/-}$). Data are expressed as mean ± Standard Deviation (SD).

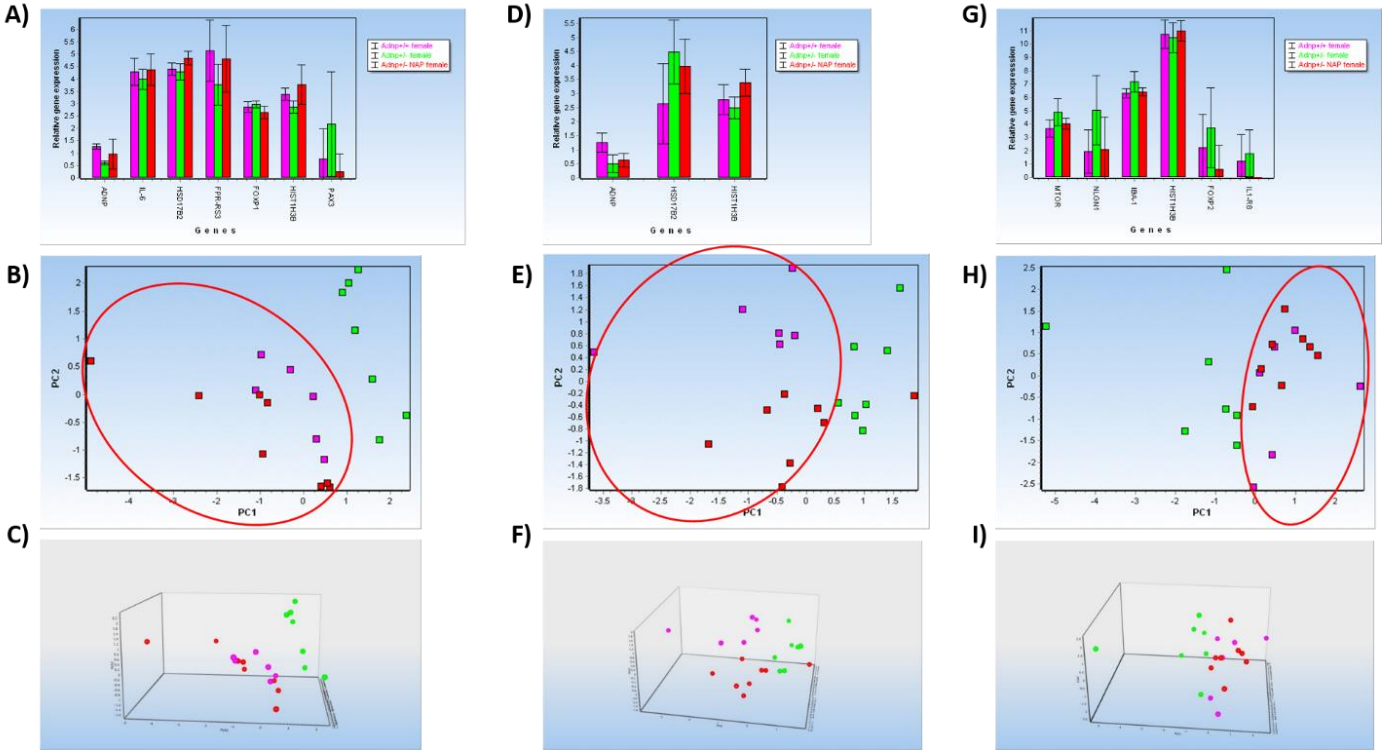


Fig. S8. Principal Component Analysis (PCA) of selected genes in 3-month-old female cortex, hippocampus and spleen. High-throughput quantitative real-time PCR was performed on mRNA extracted from hippocampus, cortex, and spleen of 3-month-old female mice (*Adnp*$^{+/+}$ N=6; *Adnp*$^{+/-}$ N=7; *Adnp*$^{+/-}$ NAP, N=8). Results are shown as relative expression units. **(A)** Relative expression of genes displaying good separation of groups in female cortex. **(B-C)** PCA based on selected female cortical genes from figure S9A. Red group of samples (*Adnp*$^{+/-}$ NAP) is clustered with pink group (*Adnp*$^{+/+}$), but not to green group of samples (*Adnp*$^{+/-}$). **(D)** Relative expression of genes displaying good separation of groups in female hippocampus. **(E-F)** PCA based on selected female hippocampal genes from figure S9D. Red group of samples (*Adnp*$^{+/-}$ NAP) is clustered with pink group (*Adnp*$^{+/+}$), but not to green group of samples (*Adnp*$^{+/-}$). **(G)** Relative expression of genes displaying good separation of groups in female spleen. **(H-I)** PCA based on selected female splenic genes from figure S9G. Red group of samples (*Adnp*$^{+/-}$ NAP) is clustered with pink group (*Adnp*$^{+/+}$), but not to green group of samples (*Adnp*$^{+/-}$). Data are expressed as mean ± Standard Deviation (SD).

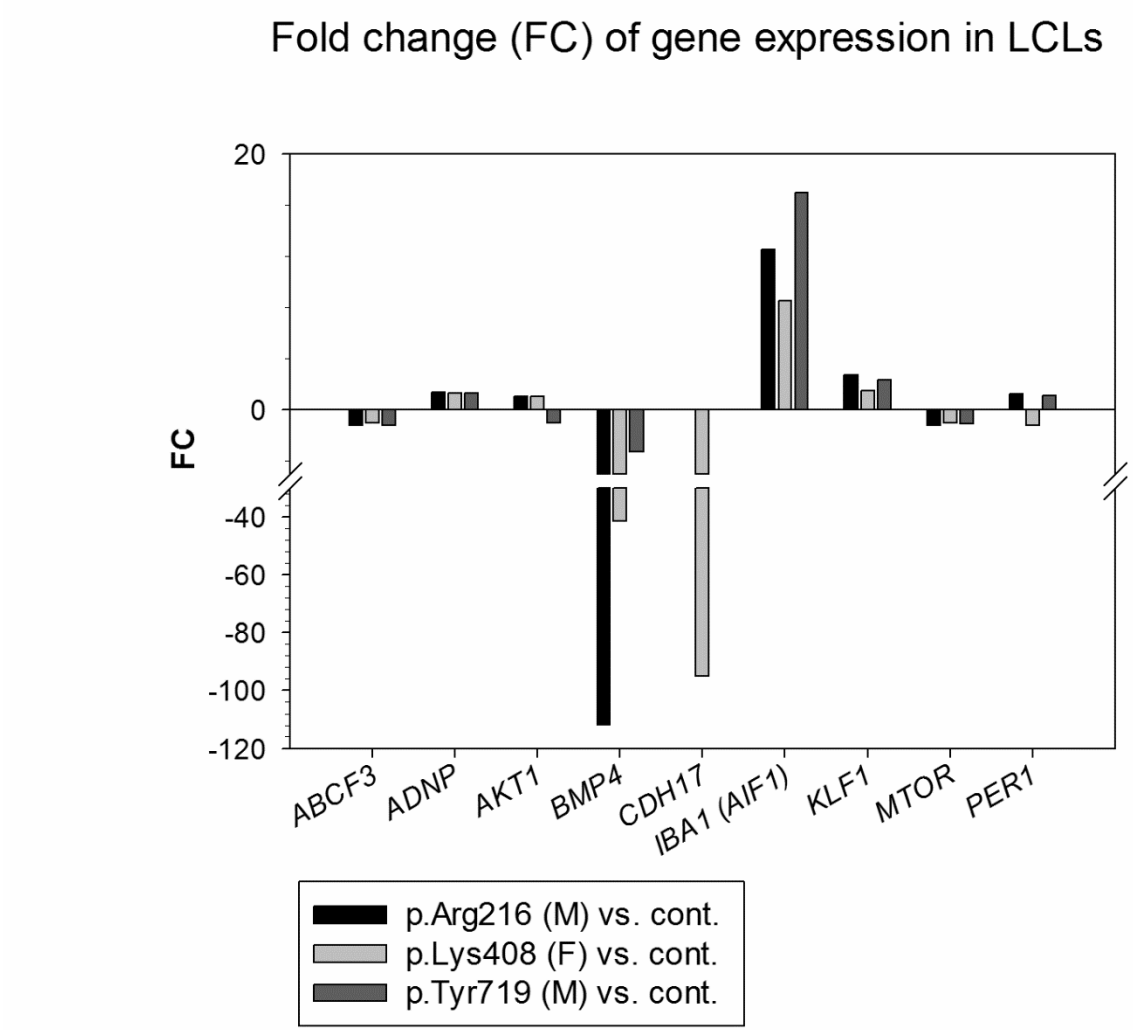


Fig. S9. Gene expression patterns in *ADNP* mutated lymphoblastoid cells mimic the *Adnp* haploinsufficient mouse model. RNA-seq and bioinformatics were performed as previously described on the lymphoblastoid cells (LCL lines; male (M), female (F)). The data have been uploaded to GEO, GSE81268 (described in our previous publications: references 6 and 18 in main text).

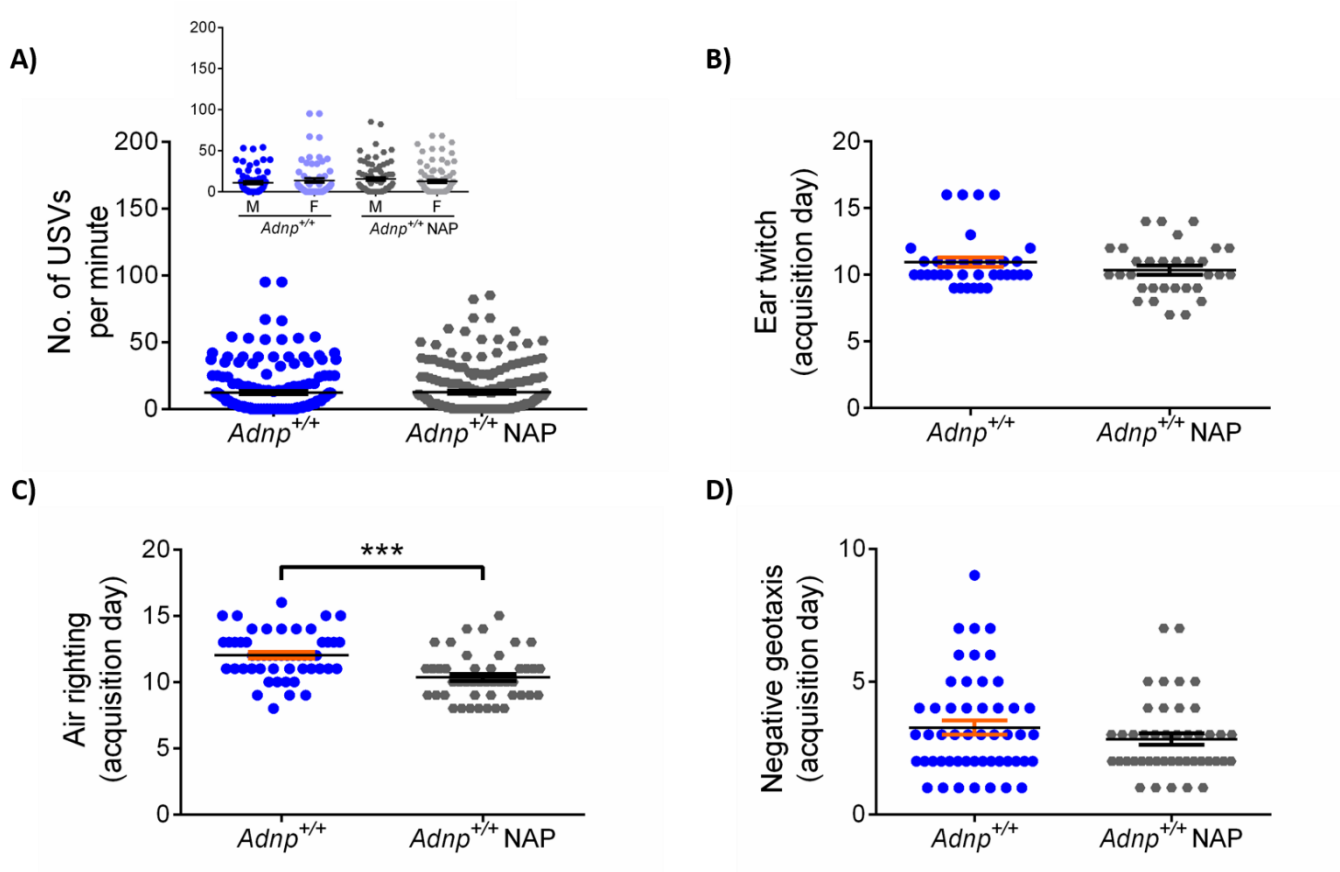


Fig. S10. NAP treatment improves air righting reflex in *Adnp*$^{+/+}$ mice, without affecting ultrasonic vocalizations and other developmental milestones of *Adnp*$^{+/+}$ mice.

(A) USVs from 8-day old *Adnp* pups were recorded for 6 minutes, following dam separation[44], and daily subcutaneous injections of NAP (25µg/ml) (20µl and 40µl on postnatal days 1-4 and 5-7, accordingly)[4, 43]. Results are presented as mean (±SEM) number of ultrasonic vocalizations recorded per minute of the trial (males: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=13, females: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=15, 6 USV calls per mouse). No significant differences were observed between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice. Additionally, no significant sex differences were found (males (M), females (F); inset graph). **(B-D)** For developmental milestone measurement, two-way ANOVA with Tukey post hoc test was performed, with data expressed as the mean (±SEM) of the first neonatal day of success in the test (*Adnp*$^{+/+}$ N=35-51; *Adnp*$^{+/+}$ NAP, N=31-45). **For air righting reflex:** a significant main treatment effect was found ($F(1,164)=24.838$, $p<0.001$), with NAP-treated *Adnp*$^{+/+}$ pups acquiring air righting reflex significantly earlier than *Adnp*$^{+/+}$ pups (***$p<0.001$). **For ear twitch and negative geotaxis reflexes:** no significant differences were observed between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice. **(A-D)** *Adnp*$^{+/+}$ is reshown in Figure 5A-D.

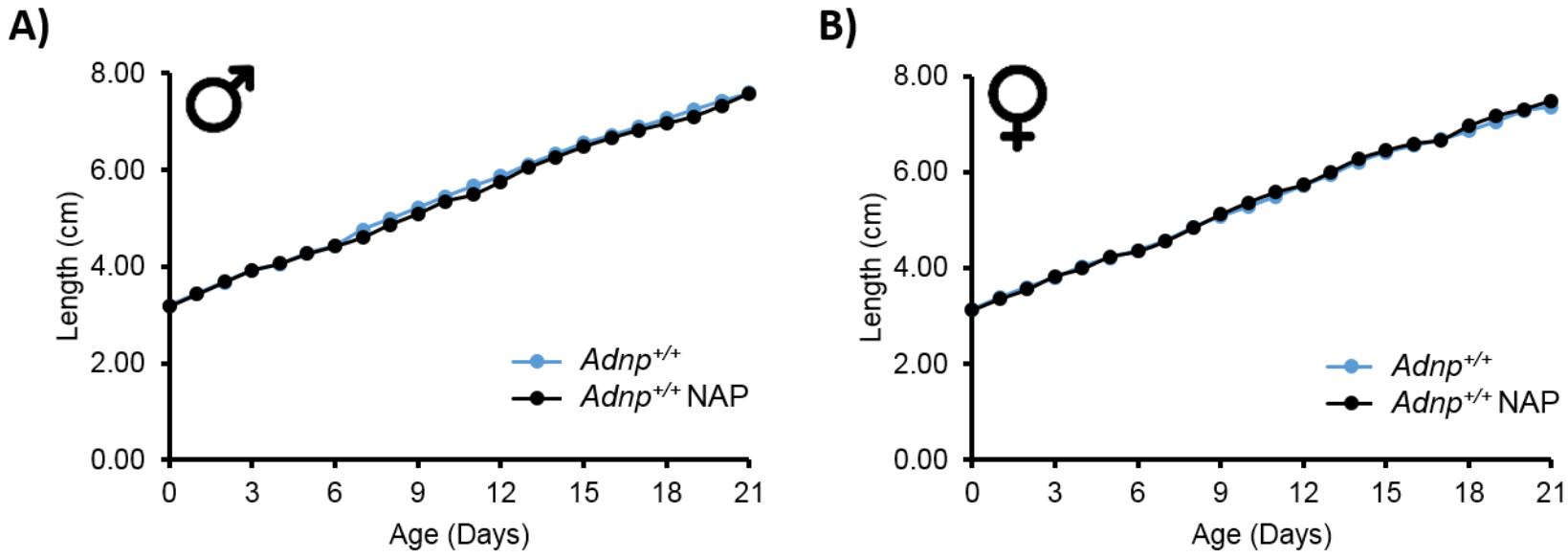


Fig. S11. NAP treatment did not affect length acquisition in male and female *Adnp*$^{+/+}$ pups. (A-B) In both males and females, Two-way ANOVA repeated measures with Bonferroni's multiple comparisons test did not reveal significant differences in length acquisition between NAP- and vehicle-treated *Adnp*$^{+/+}$ littermates (males: *Adnp*$^{+/+}$ N=18; *Adnp*$^{+/+}$ NAP, N=14, females: *Adnp*$^{+/+}$ N=20; *Adnp*$^{+/+}$ NAP, N=17). **(A-B)** *Adnp*$^{+/+}$ is reshown in Figure 6A-B.

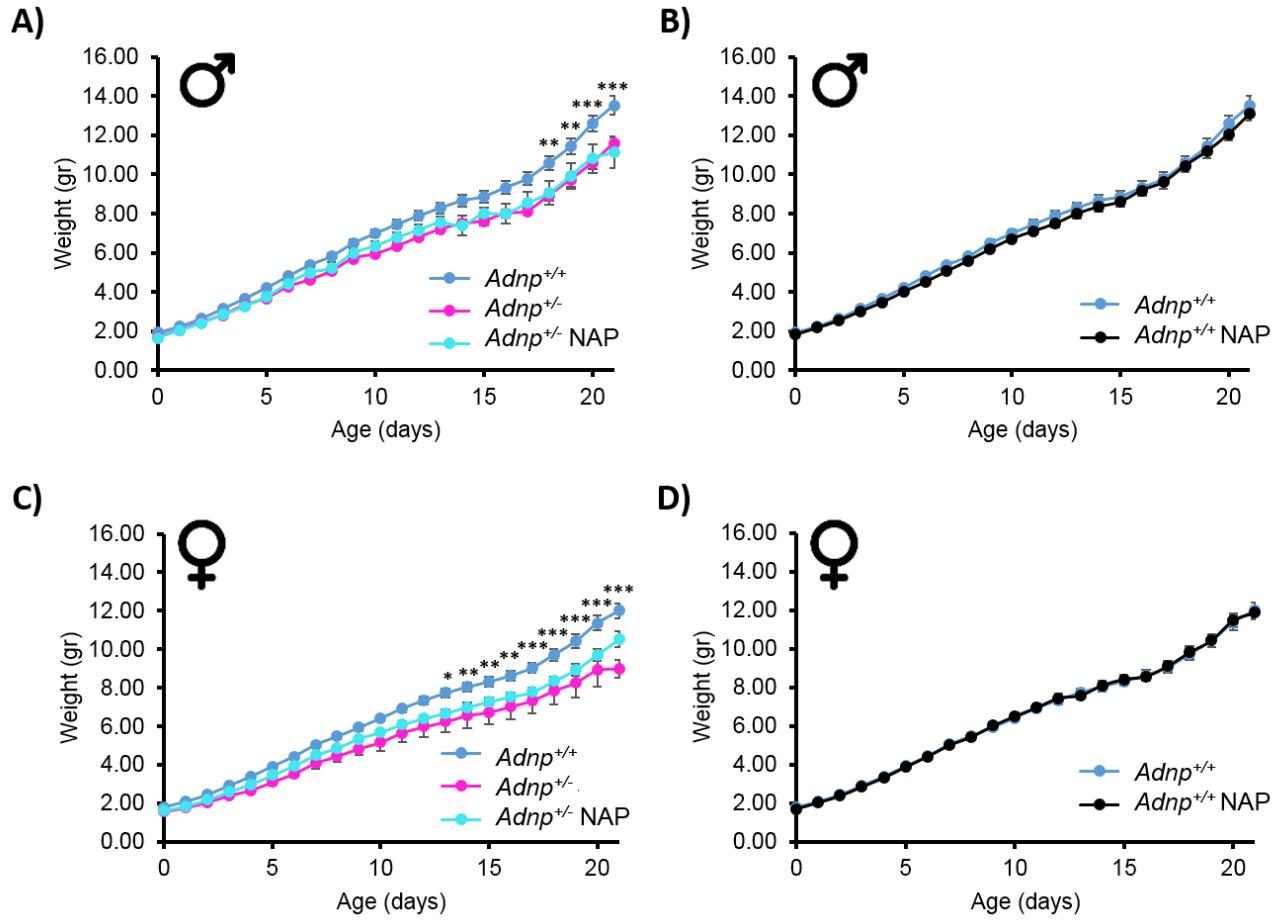


Fig. S12. *Adnp*$^{+/-}$ pups exhibit significant delayed weight gain during developmental period.
Two-way ANOVA repeated measures with Bonferroni's multiple comparisons test revealed significant differences in weight between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ littermates (males: *Adnp*$^{+/+}$ N=18; *Adnp*$^{+/+}$ NAP, N=14; *Adnp*$^{+/-}$ N=12; *Adnp*$^{+/-}$ NAP, N=12, females: *Adnp*$^{+/+}$ N=20; *Adnp*$^{+/+}$ NAP, N=17; *Adnp*$^{+/-}$ N=9; *Adnp*$^{+/-}$ NAP, N=23). **(A)** For males, main effects for group ($F(1,28)=11.925$, $p=0.002$), day ($F(21,565)=810.520$, $p<0.001$) and interaction $F(21,565)=6.898$, $p<0.001$) were found, with significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice, as indicated in graph (**p<0.01, ***p<0.001). **(B)** No significant differences were observed in weight gain between NAP- and vehicle-treated male *Adnp*$^{+/+}$ littermates. **(C)** For females, main effects for group ($F(1,27)=23.069$, $p<0.001$), day ($F(21,545)=512.322$, $p<0.001$) and interaction $F(21,545)=13.476$, $p<0.001$) were found, with significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice, as indicated in graph (*p<0.05, **p<0.01, ***p<0.001). NAP treatment did not affect weight gain in male and female pups of both genotypes. **(D)** No significant differences were observed in weight gain between NAP- and vehicle-treated female *Adnp*$^{+/+}$ littermates.

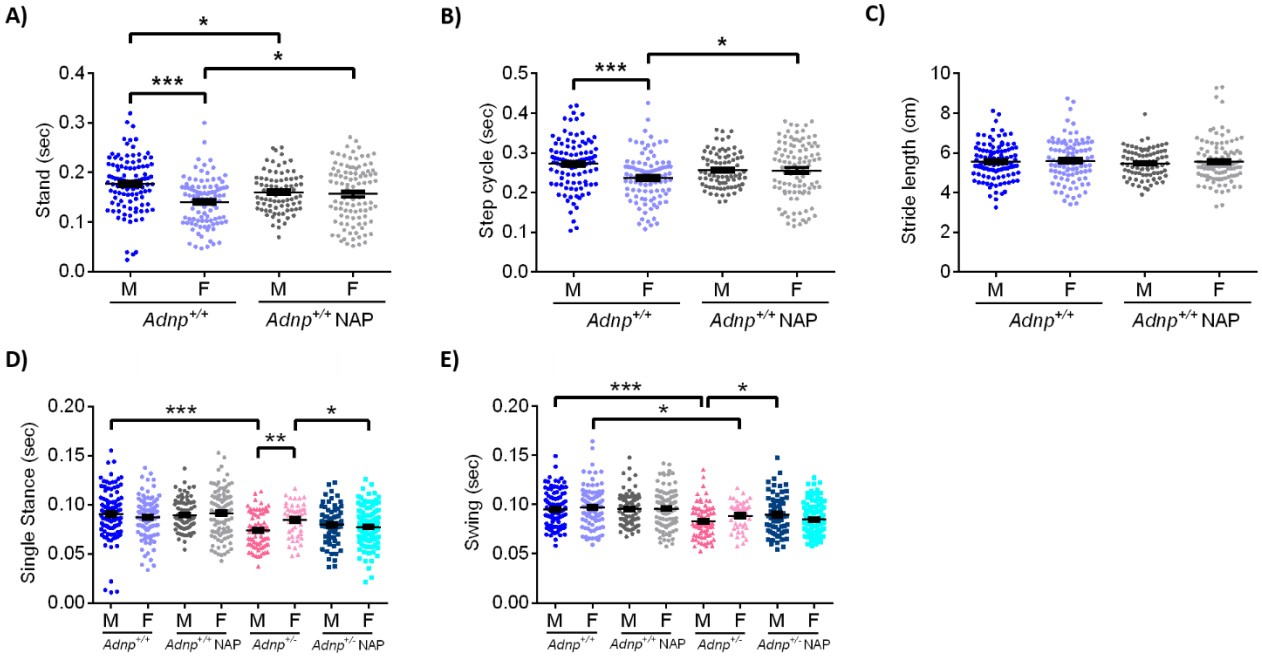


Fig. S13. NAP treatment slightly affects stand and step cycle gait parameters of *Adnp*$^{+/+}$ mice. *Adnp*$^{+/-}$ mice exhibit impaired single stance and swing gait parameters at the age of 18-40 days, with significant improvement observed in swing.

Two-way ANOVA with Tukey post hoc test was performed. Unpaired student's t-test or Mann-Whitney U test analyses were also used to determine sex differences (males: *Adnp*$^{+/+}$ N=104; *Adnp*$^{+/+}$ NAP, N=80; *Adnp*$^{+/-}$ N=72; *Adnp*$^{+/-}$ NAP, N=64, females: *Adnp*$^{+/+}$ N=96; *Adnp*$^{+/+}$ NAP, N=100; *Adnp*$^{+/-}$ N=44; *Adnp*$^{+/-}$ NAP, N=116 paw replicates/experimental group). **(A-C)** Sex differences in gait (***p<0.001, t-tests), as well as slight changes caused by NAP treatment were observed in *Adnp*$^{+/+}$ mice. **For stand (sec):** main genotype ($F(1,316)=23.683$, $p<0.001$) and interaction ($F(1,316)=18.030$, $p<0.001$) effects were found in males. In females, main interaction effect was found ($F(1,352)=4.894$, $p=0.028$). **For step cycle (sec):** a main interaction effect was found in females ($F(1,352)=4.974$, $p=0.026$). For stand and step cycle parameters, significant differences between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice (*p<0.05) were found, as well as sex differences (***p<0.001, t-test). For stride length, no significant differences were observed between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice. **(D-E)** Single stance time-period was significantly reduced in the *Adnp*$^{+/-}$ male, but not female mice and was not ameliorated by NAP treatment. Although the NAP-treated *Adnp*$^{+/+}$ mice did not differ from controls, in females, NAP treatment slightly reduced the single stance time. **For single stance:** main genotype effect was found in males ($F(1,315)=31.494$, $p<0.001$), with significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (***p<0.001). In females, main genotype ($F(1,352)=12.520$, $p<0.001$) and interaction ($F(1,352)=5.850$, $p=0.016$) effects were found. Significant differences between male *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (***p<0.001), as well as NAP- vs. vehicle-treated female *Adnp*$^{+/-}$ mice were observed (*p<0.05), together with sex differences in *Adnp*$^{+/-}$ mice (**p<0.01, Mann-Whitney U test). **For swing:** main genotype effect was found in males ($F(1,315)=18.686$, $p<0.001$) and females ($F(1,350)=23.403$, $p<0.001$). Significant differences between *Adnp*$^{+/+}$ and *Adnp*$^{+/-}$ mice (*p<0.05, ***p<0.001), as well as NAP- vs. vehicle male *Adnp*$^{+/-}$ mice (*p<0.05) were observed. **(A-C)** *Adnp*$^{+/+}$ is reshown in Figure 6C-E.

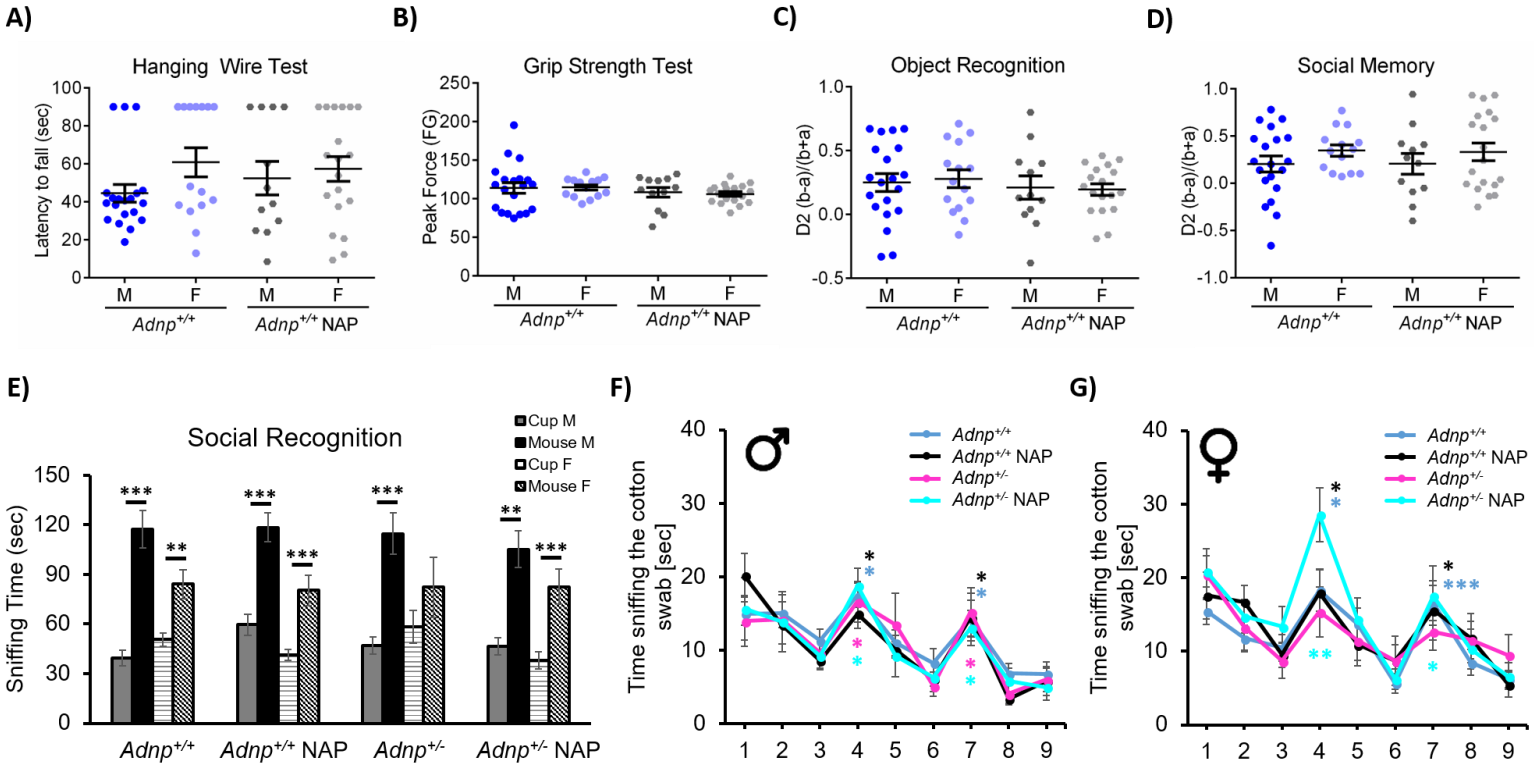


Fig. S14. NAP treatment does not affect motor, memory, social aspects of *Adnp*$^{+/+}$ mice, but restores odor discrimination ability in female *Adnp*$^{+/-}$ mice.

(A-D) In hanging wire, grip strength, novel object recognition and social memory behavioral tests, no significant differences were observed between NAP- and vehicle-treated *Adnp*$^{+/+}$ mice. Additionally, no significant sex differences were found (males (M): *Adnp*$^{+/+}$ N=20; *Adnp*$^{+/+}$ NAP, N=12, females (F): *Adnp*$^{+/+}$ N=14-15; *Adnp*$^{+/+}$ NAP, N=18-19). **(E)** Two-way repeated measures ANOVA with group as a fixed factor and sniffed item (e.g. mouse vs. cup) as repeated factor and Tukey post hoc test was performed (males: *Adnp*$^{+/+}$ N=20; *Adnp*$^{+/+}$ NAP, N=12; *Adnp*$^{+/-}$ N=12; *Adnp*$^{+/-}$ NAP, N=9, females: *Adnp*$^{+/+}$ N=15; *Adnp*$^{+/+}$ NAP, N=19; *Adnp*$^{+/-}$ N=7; *Adnp*$^{+/-}$ NAP, N=20). For males and females, a main effect for the sniffed item ($F(1,47)=83.483$, $p<0.001$; $F(1,56)=30.447$, $p<0.001$, accordingly), indicating a strong preference for the novel mouse over the pencil cup was found, with significant differences between sniffing time of the cup and mouse in vehicle- and NAP-treated *Adnp*$^{+/+}$ mice (**p<0.01, ***p<0.001 vs. cup), as well as in vehicle-treated male *Adnp*$^{+/-}$ mice, and NAP-treated *Adnp*$^{+/-}$ mice (**p<0.01, ***p<0.001 vs. cup). **(F-G)** Male mice display intact odor discrimination ability. *p<0.05, vs. previous sniffing (novel vs. familiar odor), paired t-test. Female *Adnp*$^{+/-}$ mice exhibit impaired olfactory function, restored by NAP treatment. *p<0.05, **p<0.01, ***p<0.001 vs. previous sniffing (novel vs. familiar odor), paired t-test (males: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=7; *Adnp*$^{+/-}$ N=6; *Adnp*$^{+/-}$ NAP, N=6, females: *Adnp*$^{+/+}$ N=11; *Adnp*$^{+/+}$ NAP, N=10; *Adnp*$^{+/-}$ N=5; *Adnp*$^{+/-}$ NAP, N=15). **(A-D)** *Adnp*$^{+/+}$ is reshown in Figure 7A-C, F; **(E, G)** *Adnp*$^{+/+}$ is reshown in Figure 7D, E.

Supplemental Materials and Methods:

Table S16: Experimental group allocation (N = Number of animals per experimental group).

Experimental method / Behavioral test	Age	*Adnp*$^{+/+}$		*Adnp*$^{+/+}$ NAP		*Adnp*$^{+/-}$		*Adnp*$^{+/-}$ NAP	
		Males	Females	Males	Females	Males	Females	Males	Females
Immunohistochemistry	3 months	4	4	4	4	3	4	3	4
High-throughput qRT-PCR	19-27 days	5	6	NA	NA	5	4	5	5
	3 months	3	6	NA	NA	4	7	4	8
Ultrasonic Vocalization (6 USV calls per mouse)	8 days	11	11	13	15	9	8	6	5
Ear twitch	7-15 days	20	15	12	19	12	7	8	20
Air righting	8-21 days	27	24	19	26	18	11	15	28
Negative geotaxis	1-14 days	27	24	19	26	18	11	15	28
Eye opening	1-21 days	27	24	19	26	18	11	15	28
Gait analysis (CatWalk)	18-40 days	26	24	20	25	18	11	16	29
Hanging wire	1-4 months	20	15	12	19	12	7	9	20
Forelimb grip strength	1-4 months	20	14	12	19	12	7	9	20
Object recognition	1.5-4 months	20	15	12	18	12	7	9	20
Social approach task	1.5-4 months	20	15	12	19	12	7	9	20
Odor discrimination	2.5-5.5 months	11	11	7	10	6	5	6	15

Immunohistochemistry: Mice were perfused transcardially under deep anesthesia with 4% paraformaldehyde (PFA) in 0.1M PBS, pH 7.4 and their brains were removed, post-fixed in the same fixative at 4°C overnight, and then transferred to 0.1M PBS for long-term preservation. Following brain sectioning, hippocampal and cortical brain slices were incubated overnight at 4°C in blocking solution: 1.5% normal horse serum (NHS), 0.4% Triton X-100 in 0.1M PB pH 7.4. Slices were then incubated overnight at 4 °C in blocking solution (1.5% NHS and 0.4% Triton X-100 in 0.1M PB) containing a monoclonal rabbit anti-GFP (1:250; Cat. No. G10362, Thermo Fisher Scientific, Burlington, ON, Canada), and in a randomly-chosen smaller subset, a monoclonal mouse anti-PSD95 (1:250; Cat. No. MA1-045, Thermo Fisher Scientific, Burlington, ON, Canada). Slices were washed 3 times in a solution of 0.1M PB containing 1.5%

NHS at 4 °C, with the third wash left for overnight duration. Subsequently, slices were incubated for 2 hours at RT with secondary antibodies: goat anti-rabbit Alexa Fluor 488 (1:250; Cat. No. A-11008, Life Technologies, Eugene, OR, United States), and goat anti-mouse Alexa Fluor 594 (1:250; Cat. No. A-11005, Invitrogen, Eugene, OR, United States). The slices were washed 3 times, with the third wash left for overnight duration. Then, the slices were flat mounted on glass slides and prepared for visualization and imaging.

Confocal Imaging: Mounted coronal sections were imaged using a Leica SP2 confocal microscope. Images were acquired using a 63X HCXPL APO oil-immersion objectives (NA 1.4). GFP was imaged using a 488 nm Ar laser line, and Alexa Fluor 594 was imaged using a 543 nm HeNe laser line. Channels were acquired sequentially to prevent spectral overlap of fluorophores. Optical sections of 300 nm were taken and frame averaged 3X to improve the signal-to-noise ratio. Once the images were captured, the area of interest was cropped and further processed for 3D reconstruction and analysis.

Three-dimensional reconstructions and spine quantification: Detailed numbers of dendrites/slices/slides/animals are described in Table S1. Three-dimensional images were first deconvolved with HUYGENS ESSENTIALS software (Scientific Volume Imaging, Hilversum, The Netherlands) by use of a full maximum likelihood extrapolation algorithm. Stacks were then imported and rendered with SURPASS function in Imaris (Bitplane AG). Imaris x64 8.1.2 (Bitplane AG) was used for semi-automated dendritic spine identification and quantification of all dendritic spines. The spine detection/classification program automatically detected the length of the spine head and neck. From the ratio of the diameter and the length of the head and the neck of the spines, it was possible to distinguish

the stubby, mushroom, long, thin spines, dendrite branches, and filopodia based on previously established criteria (3, 4). For analyses of shaft synapses and PSD95 volume, an isosurface was generated based on the fluorescence intensity of the 488-nm channel of the 3D confocal stack exclusively around the dendritic shaft, i.e. excluding dendritic spines. Based off this isosurface, a mask was performed on the 594-nm label to isolate puncta present only in the dendritic shaft. The "Spot" function of Imaris was then used to calculate the number of puncta present within each section of dendrite, as well as the mean volume of all puncta per section of dendrite in each image.

High-throughput qRT-PCR (HT qRT-PCR): Each cDNA sample was preamplified prior to the HT qRT-PCR. Preamplification reaction contained the following ingredients, 2 µl of 5ng/µl cDNA, 2.5 µl of assay pool (mix of 93 pairs of primes in final concentration 100 nM), 5 µl of iQ supermix (Bio-Rad) and 0.5 µl nuclease free water. Preamplification was performed at C1000 (Bio-Rad) as follows: 95°C for 3 min, 18 cycles of 95°C for 15 s and 60°C for 4 min. After preamplification, each reaction was diluted 10x, and the control of preamplification quality was assessed for all assays (selected assays are shown in Table S4).

Final qPCR was performed with the high-throughput platform BioMark™ HD System (Fluidigm) using 96.96 Dynamic Array™ IFC for Gene Expression (Fluidigm). 5µl of assay pre-mix was pipetted in assay inlets of the array, contained 2.5 µl of 10 µM forward and reverse primer mix and 2.5 µl of 2× assay loading reagent (Fluidigm). 5µl of sample premix for the sample inlets of the array contained: 1.15 µl of 10× diluted pre-amplified cDNA, 2.5 µl of Sso Fast EvaGreen Mastermix (Bio-Rad), 0.25 µl of 20× SG loading reagent (Fluidigm), 0.1 µl of ROX 4x diluted (Sigma-Aldrich) and 1 µl of nuclease-free water. Thermal conditions for qPCR were 98 °C for 3 min, 35 cycles of 98 °C for 5 s and 60 °C for 5 s. Melting curve analysis followed.

Fluidigm Real-Time PCR Analysis software (Fluidigm), GenEx Enterprise (MultiD) were used for pre-processing of qPCR data. Baseline correction of the amplification curves was set as linear derivative, and Cq threshold was set as auto detectors. Failed reactions and bad amplification curves were removed (Fluidigm Real-Time PCR Analysis software). After the export of the csv file, data were further preprocessed in GenEx Enterprise (MultiD).

Ultrasonic vocalization (USV): On day 8, each pup was separated from the dam and placed in an empty cage for 6 minutes (5). USVs (40-70 kHz) were recorded using an ultrasonic vocalization detector ANL-973-1 microphone. At the end of each trial, the pup was marked with a tattoo for identification (Ketchum, Canada), and reunited back with its dam, placed in the far corner of the box, allowing the mother to retrieve the pup (5). Data were analyzed using Med USV viewer SOF-937-1 (Med associates, Vermont, USA). The minimal time distance between calls was set to 0.04 seconds and the volume threshold was set to 40dB (5-8). Results are presented as mean number of ultrasonic vocalizations recorded per minute of the trial, compared with saline-treated *Adnp* pup littermates (control). *Adnp* genotype of the pups was confirmed at the age of 30 days (Transnetyx, Memphis, Tennessee).

Developmental milestones: For ear twitch reflex, a cotton tip was gently brushed against the tip of the ear three times, between postnatal days 7-15 or until the pup responded correctly for two consecutive days (9). For air righting reflex, the pup was held up-side down and released ~10.5cm above the cage, containing 5 cm of shavings. The test was performed between postnatal days 8-21 or until the pup landed on the shavings with all four paws, for two consecutive days (9). For negative geotaxis, the pup was placed on a screen held at

an angle of 45° for a maximum duration of 30 seconds. The time required for the pup to turn around and climb up the screen was measured (seconds). The test was performed between postnatal days 1-14 or until the pup climbed up the screen (within the 30 seconds of the test), for two consecutive days (9-11). All tests were conducted between 10AM-4PM. For the first 5 postnatal days, each pup was put under a single 60-watt bulb during testing to assure the pups' warmth.

Gait analysis: The stand (sec) gait parameter represents the duration of contact with the glass plate of the print. The step cycle (sec) gait parameter represents the time in seconds between two consecutive initial contacts of the same paw. Step cycle is also equal to the sum of the stand and swing parameters. The single stance gait parameter represents the duration (in seconds) of ground contact for a single hind paw. It is used for gait analysis in pain models. In CatWalk XT, single stance is the part in the step cycle of a hind paw where the contralateral hind paw does not touch the glass plate. Swing (sec) or swing phase is the duration in seconds of no contact of a paw with the glass plate. Stride Length is the distance (in Distance Units) between successive placements of the same paw.

Object recognition: The test included two consecutive days of habituation (5 min per day) and the experimental day which consisted of the three phases. In phase 1 (habituation), the open field apparatus (50 × 50 cm) contained two identical objects (plastic or metal, 4 × 5 cm^2) and a mouse was placed in the apparatus facing the wall and allowed to freely explore the objects (5 min). After 3 h in the home cage, the mouse was placed back into the apparatus for 3 min for phase 2 (short retention choice phase), during which one of the familiar objects was replaced with a novel object. Approximately 24 h after the completion of phase 2, the mouse was placed into the apparatus

for 3 min for phase 3 (long retention choice phase), during which one of the familiar objects was replaced with a novel object. The mouse was kept in its home cage between phases 2 and 3. The time spent sniffing/touching each object was measured. Mouse movement and exploratory behavior were tracked and recorded using the EthoVision XT video tracking system and software (Noldus Inc. Leesburg, VA). Data were analyzed using the discrimination capacity formula: D2 = (b-a)/(a+b), where ‘a’ designated the time of exploration of the familiar object and 'b' designated the time of exploration of the novel object.

Social approach: A plexiglas box was divided into three adjacent chambers, each 20 cm (length) × 40.5 cm (width) × 22 cm (height), separated by two removable doors. Steel wire pencil cups (10.16 cm (diameter), 10.8 cm (height)), www.kitchen-plus.com, were used as both containment for the target mice and as inanimate objects (weights prevented the mice from overturning the cups). Experiments were conducted in a dimly lit area during the light phase of the mouse. Target mice (males for males and females for females) were placed inside the wire cup in one of the side chambers for three 10-min sessions on the day before the test for habituation. The next day, each subject mouse was tested in an experiment with three phases, each 10-min long (measured with a simple timer): I and II, the habituation phases (ensuring no bias), and III, the experimental phase. No significant differences were noted between time periods spent in the different chambers in the habituation phase. In phase III, an empty wire cup (novel object) was placed in the center of the right or left chamber and the cup containing the target mouse was placed in the center of the other chamber. Location of the empty wire cup (novel object) and the novel mice were counterbalanced to avoid confounding side preference. The doors were then removed and a 10-min timer was initiated. The three-chamber apparatus was cleaned between mice. The social approach task was also used as habituation

for the social memory task, 3 h after the first phase (3-min exposure), the mouse was placed back into the apparatus for another 3 min (second phase), during which one cup contained the familiar mouse and the other contained a novel mouse. The positions of the familiar and novel mouse during phases 1 and 2 were counterbalanced within and between groups to exclude the possibility of positional effects but were kept the same for a given animal. Mouse movement and exploratory behavior were tracked and recorded using the EthoVision XT video tracking system and software (Noldus Inc. Leesburg, VA). The discrimination capacity (social memory) was analyzed using the formula: $D2 = (b-a)/(b+a)$.

Odor discrimination: Odors were presented on a suspended cotton swab to the test mouse placed into the clean cage with fresh shavings. Each mouse was tested during three consecutive 2-min periods for each odor, with 2-min intervals between presentations. The x axis indicates the consecutive number of the odor exposure period. The time that the mouse smelled the swab was recorded (beginning whenever the animal oriented its nostrils toward the cotton swab, within 2 cm or less).

Table S17. Raw data for hippocampal spine subtype densities.

Spine columns are defined as follows:

'Total' = Total density; 'Shaft' = Shaft synapse density

Male *Adnp*$^{+/+}$ Saline		Female *Adnp*$^{+/+}$ Saline		Male *Adnp*$^{+/+}$ NAP		Female *Adnp*$^{+/+}$ NAP		Male *Adnp*$^{+/-}$ Saline		Female *Adnp*$^{+/-}$ Saline		Male *Adnp*$^{+/-}$ NAP		Female *Adnp*$^{+/-}$ NAP	
Total	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**
0.90	1.58	1.51	1.79	0.92	1.94	2.42	1.64	1.24	2.59	0.94	1.58	1.37	2.44	1.67	1.41
1.04	1.70	1.45	1.52	1.19	1.53	2.23	1.57	0.92	2.94	1.35	1.72	0.65	1.41	1.71	1.29
1.00	1.67	1.56	1.86	0.72	1.96	1.28	1.47	1.12	2.54	0.91	1.71	1.34	1.21	1.81	1.23
0.92	2.00	1.64	1.64	1.27	1.44	0.66	1.83	0.72	2.70	1.09	1.30	0.91	1.30	1.50	1.23
0.77	1.70	1.77	1.41	0.84	1.43	1.75	1.58	0.92	2.74	1.55	1.26	1.25	1.99	1.67	1.49
1.07	2.16	1.80	1.84	0.84	1.46	1.93	1.74	1.36	2.51	1.48	1.41	0.92	2.15	1.91	1.36
2.04	1.43	1.63	1.54	1.35	1.86	0.88	1.64	0.47	2.61	1.12	2.17	0.77	1.96	1.05	0.99
1.74	1.69	1.09	1.68	1.87	1.30	1.39	1.56	1.10	2.09	0.54	1.71	0.69	2.29	1.43	1.49
1.80	1.75	1.02	1.87	1.30	1.26	0.43	1.38	0.70	2.38	1.13	1.56	0.66	2.74	1.14	1.12
1.74	1.76	2.38	1.70	1.16	2.01	1.39	1.09	0.95	3.54	1.21	2.09	0.85	2.52	1.32	1.40
1.78	2.76	1.48	1.43	1.29		1.74	1.50	0.95	3.61	0.83	1.90	0.89		1.43	1.14
1.88	2.18	1.40		1.15		1.54	1.78	0.78	2.96	1.28	1.98	0.87		1.58	0.85
1.52		1.09		1.17		1.79	1.73	0.51	1.99	1.41	2.49	0.74		1.96	1.98
1.72		1.23		1.18		1.38	1.32	0.67	1.72	0.68	2.42	1.08		1.62	2.17
1.20		1.70		1.23		1.41	1.28	0.82	2.45	1.40	2.12	1.58		1.38	1.57
1.29		1.76		1.13		1.47	1.32	0.93		1.79	2.07	1.47		1.74	1.68
1.95		1.36		1.31		1.82	1.54	0.80		1.49	2.31	1.11		1.54	1.89
1.41		2.18		0.84		1.54	1.45	0.95		1.06	1.30	1.05		1.12	1.65
1.82		1.52		1.47		1.26	1.63	0.66		0.75	1.99	0.67		1.57	1.83
1.26		1.28		0.95		1.40	1.85	0.51		0.93		0.81		2.04	
1.16		1.09		1.02		1.37	1.57	0.62		1.07		0.69		1.41	
1.61		2.20		1.13		1.45	1.44	0.59		0.94		0.78		1.46	
1.79		1.90		0.96		0.63	1.51	0.60		1.55		0.63		1.34	
1.33		1.27		1.67		1.56	1.39	0.62		0.74		0.93		1.14	
1.81		1.91		1.36		1.69	1.57	0.97		2.14		0.69		2.29	
1.75		1.69		1.12		1.13	1.45	0.89		1.63		1.54		1.63	

Male *Adnp*$^{+/+}$ Saline		Female *Adnp*$^{+/+}$ Saline		Male *Adnp*$^{+/+}$ NAP		Female *Adnp*$^{+/+}$ NAP		Male *Adnp*$^{+/-}$ Saline		Female *Adnp*$^{+/-}$ Saline		Male *Adnp*$^{+/-}$ NAP		Female *Adnp*$^{+/-}$ NAP	
Total	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**
1.52		2.12		1.20		1.40		0.72		1.59		1.15		1.72	
1.87		1.90		1.06		1.31		0.52		0.89		1.24		1.19	
1.49		1.58		0.64		1.22		1.05		0.73		0.90		1.49	
1.31		1.27		0.80		1.31		0.78		1.55		1.51		1.25	
2.20		2.07		0.92		1.66		0.33		0.49		1.27		1.48	
2.46		1.69		0.84		2.03		0.72		0.52		1.32		1.78	
2.26		1.11		0.41		1.32		0.80		1.37		1.21		1.53	
1.85		2.07		1.19		0.81		0.84		1.06		0.98		1.98	
2.15		1.23		1.34		2.01		1.05		1.48		0.71		1.86	
1.98		1.68		1.06		1.08		0.66		1.10		1.01		1.59	
1.70		1.30		1.17		0.93		1.03		1.11		0.82		1.91	
1.11		1.48		1.46		2.13		0.83		1.11		1.07		2.25	
1.24		1.63		0.99		2.01		1.22		1.46		1.08		1.93	
1.40		1.17		0.97		2.27		0.64		1.12		0.80		1.18	
1.38		2.21		1.08		2.15		0.58		1.08		1.27		1.16	
1.30		1.82		0.99		2.11		0.66		1.11		1.11		1.26	
1.60		1.66		1.56		2.16		1.75		1.66		1.02		1.98	
1.81		0.77		1.49		1.81		1.22		1.37		1.12		2.10	
1.72		1.60		1.17		1.77		1.23		1.35		1.54		1.58	
1.88		1.49		1.73		1.44		1.29				1.36			
1.27		1.48		1.68		1.32		0.60				1.31			
2.10		1.46		1.19		1.99		1.03				1.30			
1.68				1.90		1.28		1.61				1.51			
1.27				1.64				1.41				1.14			
1.31				1.33				1.94				1.31			
1.47				1.49				1.39				1.22			
1.66				1.24				1.32				1.08			
1.25				2.17				1.62				1.41			
1.45				1.91				1.55				1.77			
1.34				1.90				0.53				1.73			

Male *Adnp*$^{+/+}$ Saline		Female *Adnp*$^{+/+}$ Saline		Male *Adnp*$^{+/+}$ NAP		Female *Adnp*$^{+/+}$ NAP		Male *Adnp*$^{+/-}$ Saline		Female *Adnp*$^{+/-}$ Saline		Male *Adnp*$^{+/-}$ NAP		Female *Adnp*$^{+/-}$ NAP	
Total	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**
1.38				1.83				1.34				1.31			
1.65				1.35				1.17				0.98			
1.46				1.93				1.46				1.17			
1.32				0.83				1.61				0.94			
1.28				0.90				1.14				0.91			
1.36				1.27				0.79				0.99			
1.38				1.48				1.21				1.28			
1.36								1.34				1.43			
1.48								0.42				1.61			
1.45								1.06				1.58			
1.39								0.98				0.74			
1.18								1.00				1.81			
1.19								1.02				1.42			
1.45								1.49				1.17			
1.42								0.76				2.27			
1.26								1.06				2.18			
1.28								0.86				1.21			
1.42								1.17							
1.41								1.02							
1.65															
1.22															
2.56															
1.29															
1.67															
1.20															
2.96															
2.19															
1.82															

Table S18. Raw data for hippocampal spine subtype densities.

Spine columns are defined as follows:

'M' = Mushroom density; 'S' = Stubby density; 'Th' = Thin density; 'Vol' = PSD95 volume

Male *Adnp*$^{+/+}$ Saline				Female *Adnp*$^{+/+}$ Saline				Male *Adnp*$^{+/+}$ NAP				Female *Adnp*$^{+/+}$ NAP				Male *Adnp*$^{+/-}$ Saline				Female *Adnp*$^{+/-}$ Saline				Male *Adnp*$^{+/-}$ NAP				Female *Adnp*$^{+/-}$ NAP			
M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol
0.52	0.21	0.17	0.24	0.34	0.45	0.72	0.49	0.52	0.16	0.23	0.30	1.21	1.02	0.19	0.70	0.26	0.20	0.79	0.33	0.42	0.35	0.17	0.60	0.88	0.11	0.39	0.30	0.87	0.50	0.30	0.53
0.45	0.14	0.45	0.25	0.46	0.19	0.80	0.47	0.80	0.14	0.25	0.31	0.91	1.02	0.30	0.60	0.28	0.15	0.49	0.43	0.53	0.26	0.56	0.44	0.25	0.22	0.18	0.17	0.65	0.52	0.55	0.47
0.51	0.22	0.26	0.22	0.37	0.37	0.81	0.48	0.58	0.00	0.14	0.22	0.77	0.09	0.43	0.61	0.30	0.21	0.61	0.37	0.28	0.14	0.49	0.49	0.79	0.12	0.43	0.33	0.89	0.30	0.63	0.53
0.44	0.18	0.29	0.24	0.92	0.41	0.32	0.40	0.92	0.14	0.22	0.28	0.29	0.07	0.29	0.57	0.09	0.09	0.54	0.37	0.40	0.40	0.30	0.71	0.54	0.13	0.23	0.31	0.81	0.44	0.26	0.50
0.33	0.18	0.26	0.28	0.66	0.51	0.59	0.55	0.59	0.09	0.16	0.26	0.61	0.86	0.29	0.48	0.23	0.17	0.52	0.32	0.64	0.53	0.38	0.58	0.63	0.09	0.54	0.32	0.87	0.47	0.33	0.63
0.55	0.29	0.22	0.20	0.81	0.33	0.66	0.56	0.67	0.11	0.07	0.31	0.82	0.85	0.26	0.58	0.59	0.10	0.66	0.31	0.53	0.38	0.57	0.67	0.55	0.16	0.21	0.34	0.71	0.41	0.79	0.73
1.06	0.37	0.62	0.18	0.95	0.26	0.42	0.48	1.06	0.20	0.10	0.45	0.27	0.31	0.31	0.53	0.27	0.03	0.17	0.45	0.39	0.50	0.23	0.44	0.39	0.09	0.30	0.44	0.59	0.21	0.24	0.60
1.04	0.40	0.30	0.18	0.74	0.16	0.19	0.50	1.55	0.29	0.03	0.33	0.75	0.28	0.36	0.41	0.36	0.12	0.62	0.49	0.23	0.19	0.12	0.53	0.48	0.12	0.09	0.55	0.51	0.44	0.48	0.73
0.61	0.36	0.83	0.19	0.24	0.63	0.16	0.42	1.02	0.16	0.13	0.24	0.04	0.14	0.25	0.54	0.38	0.08	0.24	0.36	0.45	0.41	0.26	0.60	0.45	0.06	0.15	0.43	0.57	0.24	0.34	0.56
1.04	0.30	0.40	0.18	0.58	0.54	1.26	0.58	0.84	0.13	0.19	0.27	0.44	0.62	0.33	0.63	0.27	0.31	0.38	0.34	0.68	0.16	0.37	0.62	0.41	0.15	0.29	0.56	0.42	0.63	0.27	0.90
0.90	0.27	0.60	0.23	0.22	0.85	0.41	0.51	0.86	0.19	0.24		0.58	0.99	0.17	0.47	0.48	0.07	0.41	0.38	0.34	0.15	0.34	0.56	0.48	0.24	0.17		0.43	0.47	0.54	0.67
1.20	0.25	0.43	0.27	0.30	0.58	0.52		0.86	0.26	0.03		0.48	0.20	0.85	0.59	0.29	0.10	0.39		0.49	0.26	0.53	0.63	0.52	0.17	0.17		0.56	0.11	0.90	0.54
0.90	0.38	0.24		0.26	0.42	0.42		0.99	0.07	0.11		0.99	0.43	0.37	0.78	0.16	0.13	0.23		0.61	0.44	0.36	0.49	0.43	0.06	0.25		0.92	0.42	0.61	0.73
0.96	0.34	0.41		0.48	0.48	0.26		0.89	0.14	0.14		0.90	0.30	0.19	0.09	0.26	0.06	0.35		0.31	0.06	0.31	0.71	0.68	0.07	0.34		0.50	0.47	0.65	0.79
0.78	0.24	0.18		0.74	0.57	0.39		0.95	0.25	0.03		0.84	0.30	0.27	0.55	0.41	0.15	0.26		0.70	0.32	0.38	0.73	0.95	0.11	0.53		0.46	0.46	0.46	0.77
0.41	0.58	0.31		1.01	0.36	0.40		0.86	0.03	0.25		0.74	0.44	0.29	0.56	0.25	0.14	0.54		1.01	0.30	0.48	0.50	1.01	0.17	0.29		0.76	0.84	0.15	0.54
0.31	1.08	0.56		0.69	0.32	0.35		0.79	0.13	0.39		0.90	0.72	0.21		0.35	0.17	0.28		0.78	0.15	0.56	0.53	0.72	0.09	0.30		0.31	0.59	0.63	0.67
0.74	0.56	0.11		1.48	0.33	0.37		0.27	0.44	0.14		0.60	0.57	0.38		0.50	0.07	0.39		0.59	0.19	0.28	0.51	0.84	0.14	0.07		0.63	0.28	0.21	0.73
0.64	0.37	0.81		0.76	0.34	0.42		0.95	0.06	0.46		0.63	0.39	0.24		0.42	0.08	0.17		0.28	0.06	0.41		0.51	0.10	0.06		0.52	0.69	0.36	
0.60	0.28	0.39		0.59	0.26	0.44		0.66	0.16	0.13		0.36	0.84	0.20		0.26	0.07	0.18		0.45	0.41	0.07		0.39	0.24	0.18		0.53	1.48	0.04	
0.61	0.13	0.42		0.35	0.39	0.35		0.80	0.14	0.08		0.69	0.50	0.19		0.20	0.20	0.23		0.45	0.16	0.45		0.56	0.10	0.03		0.33	0.48	0.60	
0.92	0.37	0.33		0.71	0.62	0.87		0.53	0.20	0.40		0.68	0.32	0.44		0.22	0.25	0.12		0.53	0.17	0.25		0.69	0.09	0.00		0.87	0.40	0.20	
0.99	0.22	0.58		0.45	0.84	0.62		0.69	0.06	0.21		0.19	0.37	0.07		0.35	0.04	0.21		0.54	0.58	0.43		0.51	0.09	0.03		0.65	0.47	0.22	
0.88	0.14	0.31		0.49	0.19	0.59		1.18	0.26	0.23		0.89	0.48	0.19		0.29	0.03	0.29		0.37	0.15	0.21		0.77	0.13	0.03		0.66	0.29	0.18	
1.12	0.41	0.27		0.94	0.41	0.56		0.99	0.12	0.25		0.70	0.33	0.66		0.58	0.18	0.22		0.71	0.39	1.04		0.43	0.10	0.17		1.21	0.54	0.54	
0.99	0.49	0.26		0.86	0.52	0.31		0.52	0.08	0.52		0.42	0.34	0.38		0.60	0.16	0.13		0.38	0.56	0.69		1.11	0.07	0.37		0.63	0.43	0.57	
0.95	0.22	0.35		1.08	0.66	0.39		0.73	0.15	0.33		0.68	0.30	0.42		0.20	0.20	0.33		0.59	0.66	0.35		0.61	0.07	0.47		0.70	0.56	0.46	
0.95	0.37	0.54		0.76	0.53	0.61		0.44	0.31	0.31		0.43	0.72	0.16		0.21	0.07	0.24		0.55	0.26	0.07		0.94	0.12	0.18		0.60	0.35	0.25	
1.05	0.27	0.17		0.86	0.38	0.34		0.46	0.07	0.11		0.45	0.23	0.54		0.46	0.20	0.39		0.24	0.24	0.24		0.67	0.06	0.16		0.88	0.27	0.34	
0.92	0.18	0.21		0.65	0.42	0.20		0.47	0.23	0.10		0.69	0.25	0.36		0.46	0.12	0.20		0.55	0.80	0.20		1.07	0.13	0.30		0.53	0.38	0.34	

Male *Adnp*$^{+/+}$ Saline				Female *Adnp*$^{+/+}$ Saline				Male *Adnp*$^{+/+}$ NAP				Female *Adnp*$^{+/+}$ NAP				Male *Adnp*$^{+/-}$ Saline				Female *Adnp*$^{+/-}$ Saline				Male *Adnp*$^{+/-}$ NAP				Female *Adnp*$^{+/-}$ NAP			
M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol
0.60	0.33	1.27		0.64	0.74	0.69		0.56	0.23	0.13		1.06	0.30	0.30		0.22	0.07	0.04		0.23	0.19	0.08		0.96	0.18	0.14		0.56	0.56	0.37	
0.53	0.67	1.26		1.13	0.28	0.28		0.68	0.06	0.10		1.15	0.80	0.07		0.38	0.04	0.30		0.31	0.10	0.10		0.97	0.10	0.24		0.65	0.48	0.65	
0.46	0.46	1.33		0.64	0.18	0.29		0.28	0.07	0.07		0.73	0.14	0.46		0.39	0.03	0.39		0.43	0.50	0.43		0.86	0.07	0.28		0.33	0.33	0.87	
0.53	0.37	0.95		0.77	1.04	0.27		0.64	0.03	0.52		0.46	0.11	0.25		0.31	0.14	0.39		0.19	0.49	0.38		0.70	0.05	0.23		0.34	0.42	1.22	
0.62	0.56	0.97		0.51	0.47	0.25		1.18	0.00	0.16		1.13	0.26	0.62		0.54	0.09	0.42		0.30	0.82	0.35		0.43	0.12	0.15		0.61	0.30	0.94	
0.50	0.45	1.04		0.79	0.79	0.11		0.80	0.04	0.22		0.34	0.64	0.10		0.37	0.11	0.18		0.38	0.30	0.42		0.82	0.06	0.12		0.39	0.32	0.88	
0.11	0.66	0.93		0.76	0.15	0.38		0.71	0.19	0.26		0.46	0.18	0.29		0.85	0.15	0.03		0.66	0.31	0.13		0.50	0.04	0.28		0.52	0.28	1.11	
0.26	0.37	0.48		0.48	0.34	0.67		0.95	0.13	0.39		0.86	0.62	0.65		0.32	0.41	0.10		0.46	0.21	0.43		0.74	0.03	0.30		0.80	0.55	0.90	
0.20	0.40	0.64		1.06	0.39	0.18		0.45	0.09	0.45		1.13	0.32	0.57		0.66	0.38	0.19		0.82	0.25	0.38		0.61	0.11	0.36		0.89	0.32	0.71	
0.19	0.43	0.77		0.22	0.47	0.47		0.60	0.26	0.11		0.94	0.59	0.73		0.27	0.17	0.20		0.63	0.23	0.26		0.58	0.16	0.06		0.27	0.24	0.67	
0.28	0.37	0.74		0.58	1.40	0.23		0.68	0.36	0.04		1.02	0.72	0.41		0.24	0.20	0.14		0.65	0.22	0.22		0.82	0.10	0.34		0.50	0.29	0.37	
0.15	0.41	0.75		0.54	0.74	0.54		0.67	0.32	0.00		0.97	1.06	0.08		0.17	0.28	0.22		0.33	0.59	0.18		0.66	0.10	0.35		0.52	0.48	0.26	
0.18	0.53	0.89		0.87	0.36	0.43		0.74	0.71	0.12		1.25	0.46	0.46		0.11	0.34	1.30		0.65	0.54	0.47		0.77	0.04	0.21		0.40	0.74	0.84	
0.34	0.68	0.79		0.34	0.10	0.34		0.98	0.40	0.11		0.57	0.68	0.57		0.25	0.30	0.66		0.79	0.35	0.23		0.67	0.13	0.32		1.13	0.19	0.79	
0.31	0.42	0.99		1.02	0.40	0.18		0.81	0.36	0.00		0.44	0.94	0.39		0.33	0.25	0.66		0.64	0.35	0.35		0.93	0.07	0.54		0.37	0.37	0.83	
0.36	0.56	0.97		0.63	0.63	0.22		1.09	0.55	0.10		0.76	0.47	0.22		0.30	0.38	0.61						0.89	0.07	0.39					
0.27	0.46	0.54		0.35	0.60	0.54		0.77	0.91	0.00		0.62	0.35	0.35		0.14	0.21	0.25						0.89	0.06	0.35					
1.51	0.18	0.40		1.01	0.22	0.22		0.87	0.28	0.04		0.60	0.50	0.90		0.32	0.29	0.42						0.76	0.19	0.35					
1.22	0.17	0.28						1.16	0.61	0.12		0.53	0.45	0.30		0.38	0.38	0.85						0.45	0.30	0.75					
1.02	0.13	0.13						0.96	0.38	0.31						0.22	0.22	0.96						0.40	0.34	0.40					
1.13	0.14	0.03						0.77	0.21	0.35						0.36	0.57	1.01						0.26	0.31	0.73					
1.04	0.31	0.12						0.73	0.44	0.33						0.22	0.50	0.67						0.32	0.27	0.63					
1.28	0.10	0.28						0.58	0.35	0.31						0.26	0.42	0.63						0.24	0.36	0.48					
0.97	0.11	0.18						0.66	0.74	0.78						0.35	0.41	0.86						0.27	0.35	0.78					
0.93	0.14	0.38						0.64	0.70	0.57						0.74	0.67	0.14						0.34	0.42	1.01					
1.09	0.07	0.18						0.57	0.87	0.46						0.32	0.18	0.04						0.39	0.47	0.86					
1.02	0.10	0.26						0.74	0.50	0.59						0.78	0.46	0.11						0.14	0.55	0.62					
1.41	0.21	0.03						0.69	0.36	0.30						0.33	0.17	0.67						0.29	0.25	0.44					
1.13	0.07	0.26						0.77	0.85	0.32						0.61	0.73	0.12						0.21	0.38	0.59					
0.98	0.07	0.27						0.19	0.30	0.34						0.80	0.66	0.15						0.06	0.33	0.55					
0.88	0.24	0.16						0.34	0.00	0.56						0.75	0.27	0.12						0.19	0.19	0.52					
0.94	0.15	0.27						0.35	0.92	0.00						0.47	0.22	0.11						0.46	0.38	0.15					
0.93	0.19	0.26						0.77	0.51	0.19						0.69	0.29	0.23						0.79	0.41	0.08					
1.17	0.03	0.15														0.51	0.54	0.29						0.43	0.82	0.18					
0.86	0.31	0.31														0.23	0.15	0.04						0.57	0.54	0.49					

Male *Adnp*$^{+/+}$ Saline				Female *Adnp*$^{+/+}$ Saline				Male *Adnp*$^{+/+}$ NAP				Female *Adnp*$^{+/+}$ NAP				Male *Adnp*$^{+/-}$ Saline				Female *Adnp*$^{+/-}$ Saline				Male *Adnp*$^{+/-}$ NAP				Female *Adnp*$^{+/-}$ NAP			
M	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**
1.26	0.19	0.00														0.58	0.21	0.27						0.62	0.81	0.15					
0.98	0.24	0.17														0.43	0.43	0.11						0.45	0.26	0.04					
0.69	0.21	0.28														0.43	0.47	0.11						0.81	0.70	0.30					
0.68	0.29	0.22														0.46	0.42	0.14						0.58	0.71	0.13					
1.04	0.30	0.11														0.71	0.57	0.20						0.69	0.14	0.34					
1.04	0.11	0.26														0.53	0.19	0.04						0.73	0.51	1.02					
0.89	0.33	0.04														0.49	0.30	0.27						0.71	1.47	0.00					
0.58	0.43	0.27														0.33	0.36	0.16						0.66	0.42	0.12					
0.80	0.22	0.40														0.50	0.38	0.29													
0.51	0.48	0.41														0.61	0.41	0.00													
0.44	1.15	0.07																													
0.42	0.72	0.08																													
1.15	1.15	0.27																													
0.90	0.40	0.00																													
0.77	0.77	0.13																													
0.55	0.52	0.13																													
1.56	1.33	0.00																													
0.90	1.11	0.17																													
0.55	1.15	0.12																													

Table S19. Raw data for cortical spine subtype densities.

Spine columns are defined as follows:

'Total' = Total density; 'Shaft' = Shaft synapse density

Male *Adnp*$^{+/+}$ Saline		Female *Adnp*$^{+/+}$ Saline		Male *Adnp*$^{+/+}$ NAP		Female *Adnp*$^{+/+}$ NAP		Male *Adnp*$^{+/-}$ Saline		Female *Adnp*$^{+/-}$ Saline		Male *Adnp*$^{+/-}$ NAP		Female *Adnp*$^{+/-}$ NAP	
Total	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**
1.68	0.58	2.21	1.28	1.76	0.94	1.84	0.74	1.25	0.91	0.98	1.37	1.86	1.47	1.66	0.86
1.35	0.75	2.23	1.28	2.11	1.24	1.85	0.94	1.08	1.18	1.85	1.40	1.37	1.47	1.38	1.08
1.36	0.66	1.43	1.04	2.12	1.26	1.76	1.09	0.26	1.13	1.56	1.25	1.42	1.37	1.35	1.07
1.34	1.03	1.39	1.34	1.44	1.12	2.75	1.06	1.28	1.30	0.63	1.36	1.52	1.40	0.87	0.77
1.38	0.91	1.63	1.47	1.22	0.95	2.92	1.64	1.28	1.16	0.28	1.31	1.29	0.98	1.98	1.43
1.84	0.70	2.06	1.11	1.96	1.16	1.24	1.11	0.50	1.28	0.44	1.54	1.56	1.07	2.05	1.10
2.37	1.42	1.12	1.11	1.82	1.09	1.88	1.20	0.86	1.56	1.39	0.99	1.54	1.02	1.90	1.14
1.36	1.22	1.45	1.54	2.00	0.95	1.56	1.10	0.92	1.36	0.95	1.16	2.23	1.15	1.68	1.21
1.39	1.14	2.67	1.54	1.83	1.15	2.19	1.04	1.22	0.95	1.22	1.17	1.63	1.22	1.10	2.06
2.52	0.90	1.34	1.85	1.66	1.19	1.97	1.00	1.07	1.69	0.89	1.16	2.10	0.98	2.01	0.78
2.62	1.09	1.47	0.86	1.69	1.23	1.67	0.96	0.91	1.71	1.37	0.84	1.83	0.91	1.94	1.01
1.73	1.43	1.55	0.94	1.63	1.32	1.74	0.95	1.09	1.55	0.72	1.23	2.78	1.06	1.91	1.07
2.42	1.47	1.50	1.53	1.89	1.08	2.03	1.27	1.59	1.64	1.32	1.24	1.98	1.30	1.78	1.26
1.63	1.20	1.66	0.97	1.40	1.16	1.95	1.30	0.89	1.22	1.16	1.09	1.98	1.32	1.41	1.01
1.51		1.52	1.17	1.39		1.65	1.32	0.43		0.98	1.06	2.12	0.78	1.17	1.17
1.50		2.01	1.39	0.91		1.94	0.94	0.94		0.96	1.96	2.76	0.88	1.28	1.10
1.98		1.04	1.71	0.73		1.78	1.41	0.95		0.50	1.86	1.77	0.90	1.28	1.05
1.49		1.13	1.33	0.67		1.94	1.25	1.05		1.49	1.29	1.96		0.86	1.00
1.82		1.35		2.29		2.24		0.48		0.44		2.14		0.99	
1.80		0.99		1.49		2.28		0.97		1.73		1.20		1.12	
1.92		1.95		1.55		2.06		1.12		1.64		0.88		0.99	
2.36		1.93		1.41		2.05		0.71		0.55		1.59		0.88	
1.90		1.68		0.61		2.00		1.38		1.65		1.50		0.69	
1.52		1.14		0.66		2.26		0.80		0.16		1.60		1.85	
1.66		1.06		1.56		1.80		0.65		0.44		1.61		1.53	
1.83		1.42		1.63		1.55		0.88		0.45		1.96		1.22	

Male *Adnp*$^{+/+}$ Saline		Female *Adnp*$^{+/+}$ Saline		Male *Adnp*$^{+/+}$ NAP		Female *Adnp*$^{+/+}$ NAP		Male *Adnp*$^{+/-}$ Saline		Female *Adnp*$^{+/-}$ Saline		Male *Adnp*$^{+/-}$ NAP		Female *Adnp*$^{+/-}$ NAP	
Total	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**	**Total**	**Shaft**
1.53		1.94		1.72		1.07		0.97		0.33		2.06		1.25	
1.36		1.52		1.92		1.35		1.21		1.33		1.65		1.19	
1.75		1.38		1.63		1.16		1.52		1.62		1.58		1.82	
2.04		1.87		1.67		1.16		1.08		1.29		1.47		1.65	
2.14		1.38		1.00		1.50		1.08		1.55		1.61		1.81	
2.08		1.10		1.19		1.42		1.36		0.54		1.52		2.03	
1.48		1.75		2.21		1.13		0.18		0.84		2.22		1.95	
1.93		2.03		1.96		1.46		0.91		1.13		1.86		1.41	
1.97		2.07		1.80		1.49		0.63		0.84		2.32		0.94	
1.97		1.74		1.80		1.75		1.52		1.23		2.40		1.60	
1.78		1.92		1.95		2.21		1.30		1.20		2.07		1.40	
1.70		1.48		2.32		1.73		1.29		1.00		1.99		1.82	
2.33		1.47		1.00		1.44		1.42		0.58		1.76		1.71	
2.74		1.53		1.37		1.46		0.78		1.03		1.99		1.74	
2.63		1.78		1.22		1.26		1.10		1.19		1.96		1.46	
2.09		1.21		1.58		0.99		0.53		0.58		1.99		1.87	
1.29		1.35		1.55		1.86		1.14		1.05		1.81		1.44	
1.25		1.35		1.70		1.40				1.06		2.14		1.13	
1.57		1.79		1.96		1.54				1.52		1.92		0.92	
1.89		1.29		2.48		1.64				1.25				0.91	
1.79		1.70		2.04		1.22				1.58				1.24	
						1.78								1.04	
						1.55								1.26	

Table S20. Raw data for cortical spine subtype densities.

Spine columns are defined as follows:

'M' = Mushroom density; 'S' = Stubby density; 'Th' = Thin density; 'Vol' = PSD95 volume

Male Adnp$^{+/+}$ Saline				Female Adnp$^{+/+}$ Saline				Male Adnp$^{+/+}$ NAP				Female Adnp$^{+/+}$ NAP				Male Adnp$^{+/-}$ Saline				Female Adnp$^{+/-}$ Saline				Male Adnp$^{+/-}$ NAP				Female Adnp$^{+/-}$ NAP			
M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol	M	S	Th	Vol
0.86	0.43	0.39	0.46	1.33	0.44	0.44	0.22	1.03	0.48	0.24	0.21	1.07	0.61	0.15	0.27	0.51	0.62	0.11	0.41	0.45	0.34	0.19	0.27	1.24	0.34	0.28	0.29	0.83	0.44	0.39	0.46
0.67	0.31	0.36	0.33	0.98	0.62	0.62	0.28	0.42	1.12	0.56	0.27	0.80	0.46	0.59	0.33	0.37	0.48	0.22	0.41	0.41	0.70	0.74	0.24	0.51	0.47	0.39	0.28	0.75	0.38	0.25	0.45
0.59	0.24	0.52	0.38	0.58	0.54	0.31	0.22	0.57	1.10	0.45	0.24	0.72	0.50	0.55	0.31	0.04	0.07	0.15	0.36	0.73	0.51	0.32	0.29	0.99	0.23	0.20	0.24	0.68	0.24	0.44	0.41
0.45	0.48	0.41	0.22	0.91	0.26	0.22	0.18	0.69	0.39	0.36	0.30	1.37	0.75	0.62	0.19	0.34	0.88	0.06	0.33	0.12	0.47	0.04	0.33	1.00	0.30	0.22	0.34	0.48	0.22	0.17	0.57
0.56	0.56	0.26	0.27	0.83	0.27	0.53	0.23	0.49	0.52	0.21	0.32	1.51	0.73	0.68	0.21	0.44	0.73	0.11	0.30	0.06	0.22	0.00	0.22	0.85	0.26	0.18	0.28	0.93	0.27	0.77	0.38
0.83	0.21	0.79	0.44	1.32	0.39	0.34	0.17	0.69	0.72	0.55	0.27	0.55	0.34	0.34	0.23	0.50	0.38	0.12	0.35	0.00	0.40	0.04	0.28	0.63	0.15	0.78	0.37	0.81	0.53	0.72	0.30
0.41	1.70	0.26	0.21	0.64	0.16	0.32	0.14	0.67	0.41	0.74	0.27	1.05	0.59	0.23	0.17	0.32	0.26	0.29	0.28	0.64	0.32	0.44	0.38	0.98	0.30	0.26	0.36	1.43	0.32	0.14	0.30
0.93	0.15	0.28	0.22	0.91	0.27	0.27	0.14	1.03	0.48	0.48	0.31	0.86	0.65	0.04	0.34	0.33	0.29	0.29	0.28	0.54	0.35	0.06	0.28	1.06	0.55	0.62	0.36	0.61	0.38	0.69	0.32
0.82	0.38	0.19	0.28	1.51	0.39	0.78	0.19	0.72	0.18	0.93	0.24	1.19	0.62	0.38	0.35	0.85	0.10	0.27	0.36	0.56	0.52	0.14	0.33	0.95	0.44	0.24	0.27	0.52	0.26	0.31	0.21
1.63	0.26	0.63	0.39	0.65	0.53	0.16	0.26	0.83	0.23	0.60	0.26	0.99	0.86	0.12	0.36	0.42	0.32	0.32	0.28	0.16	0.12	0.61	0.33	0.79	0.53	0.79	0.36	0.96	0.60	0.44	0.37
1.60	0.38	0.64	0.36	0.96	0.42	0.08	0.27	0.75	0.60	0.34	0.25	0.72	0.72	0.23	0.34	0.40	0.40	0.12	0.30	0.69	0.27	0.42	0.30	1.33	0.19	0.32	0.43	1.08	0.48	0.38	0.38
1.09	0.34	0.30	0.22	0.74	0.34	0.47	0.36	1.12	0.22	0.29	0.27	1.34	0.32	0.08	0.37	0.45	0.18	0.45	0.36	0.15	0.31	0.27	0.31	1.78	0.64	0.36	0.36	0.86	0.53	0.53	0.39
1.23	0.32	0.87	0.26	0.68	0.36	0.46	0.21	1.09	0.64	0.15	0.32	1.07	0.50	0.46	0.21	0.74	0.74	0.11	0.33	0.54	0.24	0.54	0.33	1.34	0.38	0.27	0.40	0.73	0.50	0.55	0.26
0.96	0.25	0.41	0.25	0.78	0.61	0.26	0.22	1.00	0.28	0.12	0.28	1.13	0.74	0.09	0.27	0.32	0.29	0.29	0.33	0.63	0.38	0.16	0.30	1.43	0.24	0.31	0.38	0.75	0.35	0.31	0.35
0.76	0.24	0.52		0.87	0.36	0.29	0.21	0.93	0.46	0.00		0.98	0.46	0.21	0.30	0.12	0.28	0.03		0.49	0.39	0.11	0.38	1.35	0.55	0.21	0.55	0.69	0.36	0.12	0.32
1.03	0.41	0.07		1.09	0.61	0.31	0.15	0.60	0.28	0.04		1.16	0.50	0.27	0.33	0.34	0.37	0.24		0.48	0.32	0.16	0.25	1.56	0.91	0.29	0.48	0.68	0.36	0.24	0.37
0.90	0.76	0.32		0.48	0.24	0.32	0.13	0.35	0.07	0.31		1.05	0.48	0.24	0.24	0.49	0.26	0.20		0.31	0.12	0.08	0.29	0.94	0.31	0.52	0.47	0.68	0.27	0.32	0.44
0.71	0.57	0.21		0.63	0.38	0.13	0.16	0.57	0.07	0.03		1.27	0.40	0.28	0.26	0.28	0.66	0.10		0.69	0.48	0.33	0.35	0.88	0.52	0.56		0.21	0.25	0.39	0.39
1.26	0.41	0.15		0.73	0.46	0.15		1.42	0.42	0.45		1.19	0.63	0.41		0.29	0.16	0.03		0.16	0.16	0.13		0.80	0.29	1.05		0.72	0.15	0.11	
0.96	0.58	0.27		0.68	0.09	0.23		0.91	0.36	0.22		1.42	0.53	0.32		0.43	0.29	0.25		0.87	0.48	0.38		0.51	0.33	0.36		0.41	0.47	0.24	
0.98	0.75	0.19		0.83	0.61	0.51		0.95	0.42	0.18		1.01	0.84	0.21		0.61	0.29	0.22		0.62	0.53	0.50		0.39	0.10	0.39		0.62	0.25	0.12	
1.28	0.31	0.77		1.09	0.58	0.26		0.95	0.17	0.29		1.01	0.50	0.54		0.41	0.14	0.17		0.19	0.32	0.03		1.04	0.52	0.03		0.48	0.22	0.18	
0.97	0.48	0.45		0.70	0.49	0.49		0.37	0.20	0.03		1.16	0.41	0.43		0.55	0.38	0.45		0.81	0.24	0.60		1.01	0.03	0.46		0.41	0.14	0.14	
0.95	0.49	0.08		0.45	0.24	0.45		0.46	0.03	0.17		1.13	0.65	0.48		0.35	0.39	0.06		0.06	0.06	0.03		1.00	0.19	0.41		0.87	0.40	0.58	
0.90	0.54	0.23		0.49	0.38	0.19		0.98	0.37	0.21		1.35	0.34	0.11		0.15	0.37	0.12		0.18	0.18	0.09		1.20	0.37	0.04		0.81	0.27	0.45	
1.21	0.40	0.22		0.58	0.26	0.58		0.90	0.47	0.25		0.84	0.55	0.16		0.21	0.25	0.42		0.11	0.30	0.04		1.02	0.55	0.38		0.30	0.30	0.61	
1.27	0.07	0.18		1.10	0.39	0.45		1.33	0.07	0.32		0.63	0.26	0.18		0.42	0.21	0.35		0.03	0.30	0.00		1.29	0.40	0.37		0.81	0.22	0.22	
0.83	0.36	0.18		0.94	0.40	0.18		1.22	0.41	0.28		0.93	0.08	0.35		0.62	0.36	0.23		0.30	0.60	0.43		0.77	0.27	0.62		0.68	0.18	0.32	
0.94	0.39	0.42		0.90	0.26	0.22		0.85	0.31	0.47		0.56	0.22	0.37		0.69	0.39	0.43		0.40	0.65	0.57		0.77	0.62	0.19		0.95	0.37	0.50	
1.22	0.71	0.11		0.93	0.34	0.60		1.02	0.18	0.47		0.78	0.34	0.04		0.90	0.15	0.03		0.26	0.63	0.40		0.85	0.37	0.26		0.75	0.45	0.45	

Male Adnp$^{+/+}$ Saline				Female Adnp$^{+/+}$ Saline				Male Adnp$^{+/+}$ NAP				Female Adnp$^{+/+}$ NAP				Male Adnp$^{+/-}$ Saline				Female Adnp$^{+/-}$ Saline				Male Adnp$^{+/-}$ NAP				Female Adnp$^{+/-}$ NAP			
M	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**	**M**	**S**	**Th**	**Vol**
0.94	0.80	0.40		0.86	0.22	0.30		0.58	0.39	0.03		0.80	0.28	0.42		0.68	0.40	0.00		0.72	0.41	0.41		0.60	0.26	0.75		1.01	0.35	0.44	
1.19	0.73	0.17		0.59	0.34	0.17		0.79	0.32	0.07		1.03	0.24	0.15		1.07	0.14	0.14		0.32	0.18	0.04		0.72	0.32	0.48		1.00	0.78	0.26	
0.85	0.30	0.33		0.85	0.41	0.50		0.93	0.62	0.66		0.79	0.19	0.15		0.07	0.11	0.00		0.19	0.23	0.42		1.33	0.40	0.49		1.27	0.44	0.24	
1.13	0.64	0.15		0.89	0.33	0.81		1.45	0.31	0.20		1.02	0.34	0.10		0.30	0.51	0.10		0.50	0.22	0.41		0.98	0.39	0.49		1.04	0.19	0.19	
1.40	0.27	0.30		0.87	0.68	0.52		1.12	0.50	0.18		0.85	0.60	0.04		0.37	0.18	0.07		0.35	0.40	0.09		1.12	0.98	0.22		0.58	0.13	0.22	
1.06	0.72	0.19		1.11	0.35	0.29		1.20	0.11	0.49		1.02	0.60	0.14		0.90	0.33	0.30		0.46	0.40	0.37		1.71	0.62	0.07		0.86	0.62	0.12	
0.89	0.33	0.56		1.28	0.44	0.20		1.01	0.36	0.58		1.29	0.75	0.17		0.88	0.15	0.27		0.95	0.19	0.06		1.48	0.41	0.18		0.82	0.19	0.39	
1.11	0.30	0.30		1.09	0.27	0.12		1.59	0.60	0.13		1.14	0.37	0.22		0.78	0.10	0.41		0.56	0.20	0.24		1.31	0.38	0.30		0.81	0.57	0.45	
1.23	0.65	0.45		0.78	0.45	0.24		0.54	0.15	0.30		0.84	0.35	0.25		0.75	0.22	0.45		0.24	0.31	0.03		0.89	0.55	0.32		0.62	0.39	0.70	
1.94	0.47	0.33		1.04	0.40	0.09		0.60	0.21	0.56		0.84	0.44	0.18		0.42	0.18	0.18		0.56	0.19	0.28		1.23	0.49	0.27		0.93	0.40	0.40	
1.46	0.78	0.39		1.14	0.36	0.29		0.61	0.12	0.49		0.77	0.42	0.07		0.72	0.13	0.25		0.58	0.51	0.10		1.17	0.69	0.10		1.04	0.33	0.08	
1.33	0.46	0.30		0.77	0.26	0.18		0.98	0.27	0.34		0.49	0.25	0.25		0.23	0.19	0.11		0.04	0.38	0.15		1.28	0.52	0.19		1.17	0.22	0.48	
0.82	0.29	0.18		0.55	0.46	0.34		0.84	0.25	0.46		1.30	0.37	0.19		0.52	0.42	0.21		0.74	0.24	0.07		1.16	0.44	0.22		0.67	0.26	0.51	
0.42	0.15	0.68		0.84	0.14	0.37		0.74	0.56	0.41		0.64	0.39	0.36						0.73	0.12	0.21		1.18	0.56	0.40		0.68	0.36	0.09	
0.88	0.38	0.31		1.05	0.41	0.34		1.11	0.51	0.34		0.88	0.57	0.09						0.64	0.23	0.64		0.83	0.64	0.45		0.46	0.28	0.18	
0.83	0.59	0.46		0.77	0.25	0.28		1.43	0.68	0.38		0.78	0.30	0.56						0.68	0.14	0.43						0.59	0.18	0.14	
1.18	0.42	0.19		0.95	0.61	0.14		1.29	0.42	0.34		0.71	0.22	0.29						0.72	0.18	0.68						0.45	0.49	0.30	
												0.94	0.68	0.16														0.54	0.36	0.14	
												0.80	0.56	0.19														0.78	0.34	0.15	

Table S21. Raw data for high-throughput quantitative real-time PCR gene expression results during developmental period in 19-27-day-old animals.

				Gene expression		
Mouse No.	**Genotype**	**Treatment**	**Sex**	***Fpr-rs3***	***Tubb1***	***Adnp***
7S1	*Adnp*$^{+/+}$	Saline/DD	Male	4.42	0.48	1.00
7S2	*Adnp*$^{+/+}$	Saline/DD	Male	4.87	2.44	1.31
8S1	*Adnp*$^{+/+}$	Saline/DD	Male	4.27	1.27	2.20
9S5	*Adnp*$^{+/+}$	Saline/DD	Male	4.34	1.19	2.98
11S3	*Adnp*$^{+/+}$	Saline/DD	Male	3.40	1.42	1.57
8S2	*Adnp*$^{+/+}$	Saline/DD	Female	4.54	0.00	1.30
8S3	*Adnp*$^{+/+}$	Saline/DD	Female	3.70	1.16	1.57
9S1	*Adnp*$^{+/+}$	Saline/DD	Female	3.91	1.83	2.90
10S1	*Adnp*$^{+/+}$	Saline/DD	Female	3.78	1.84	2.22
10S2	*Adnp*$^{+/+}$	Saline/DD	Female	4.73	1.44	2.32
12S3	*Adnp*$^{+/+}$	Saline/DD	Female	2.80	1.74	2.33
8S4	*Adnp*$^{+/-}$	Saline/DD	Male	3.14	1.43	1.49
9S2	*Adnp*$^{+/-}$	Saline/DD	Male	3.80	0.51	1.58
9S3	*Adnp*$^{+/-}$	Saline/DD	Male	3.69	2.90	1.56
9S4	*Adnp*$^{+/-}$	Saline/DD	Male	3.06	2.02	1.19
10S4	*Adnp*$^{+/-}$	Saline/DD	Male	2.41	0.83	1.25
8S5	*Adnp*$^{+/-}$	Saline/DD	Female	4.89	3.63	0.39
10S3	*Adnp*$^{+/-}$	Saline/DD	Female	4.57	2.55	1.00
10S5	*Adnp*$^{+/-}$	Saline/DD	Female	3.87		0.00
12S4	*Adnp*$^{+/-}$	Saline/DD	Female	2.17	2.33	0.92
7N2	*Adnp*$^{+/-}$	NAP	Male	4.63	1.94	0.71
8N4	*Adnp*$^{+/-}$	NAP	Male	3.74	0.69	1.26
8N5	*Adnp*$^{+/-}$	NAP	Male	4.09	1.37	1.37
9N2	*Adnp*$^{+/-}$	NAP	Male	4.20	2.40	1.10
10N4	*Adnp*$^{+/-}$	NAP	Male	4.18	1.43	0.03
8N2	*Adnp*$^{+/-}$	NAP	Female	3.16	0.27	1.15
9N1	*Adnp*$^{+/-}$	NAP	Female	0.00	0.69	1.84
10N2	*Adnp*$^{+/-}$	NAP	Female	4.07	1.73	1.22
10N3	*Adnp*$^{+/-}$	NAP	Female	3.63		2.48
10N5	*Adnp*$^{+/-}$	NAP	Female	4.24		0.85

Table S22. Raw data for high-throughput quantitative real-time PCR gene expression results in 3-month-old animals.

Gene expression																			
Mouse No.	**Genotype**	**Treatment**	**Sex**	***Hsd17b2***	***Apoe***	***Gm21949***	***Lipa***	***Nlgn2***	***Pax6***	***Wfs1***	***Abcf3***	***Akt 1***	***Bmp4***	***Cdh17***	***Iba1***	***Kdm5d***	***Klf1***	***Mtor***	***Per1***
2717	*Adnp*$^{+/+}$	Saline/DD	Male	0.81	2.84	3.66	3.39	4.18	5.39	3.53	0.76	0.81	2.09	1.19	0.30	1.48	1.40	0.99	2.55
2720	*Adnp*$^{+/+}$	Saline/DD	Male	1.23	3.49	3.77	4.42	5.11	5.97	3.93	0.95	1.87	1.97	2.37	0.05	0.00	2.10	1.08	2.39
2719	*Adnp*$^{+/+}$	Saline/DD	Male	0.67	2.61	2.73	3.28	3.97	5.09	3.12	1.46	2.51	0.00	2.40	1.03	2.03	1.95	1.87	3.09
2715	*Adnp*$^{+/+}$	Saline/DD	Female	1.34	3.20	4.12	3.85	4.39	5.76	3.46	1.97	1.89	2.68	0.00	0.68		2.61	1.55	3.59
2718	*Adnp*$^{+/+}$	Saline/DD	Female	1.44	2.70	3.51	3.62	3.89	4.98	3.41	1.34	1.83	3.06	2.97	1.03		2.11	1.38	4.33
2711	*Adnp*$^{+/+}$	Saline/DD	Female	1.44	3.40	4.31	3.70	4.84	5.75	4.02	1.32	1.82	3.46	2.23	0.28		3.17	1.11	3.73
2735	*Adnp*$^{+/+}$	Saline/DD	Female	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.47	1.78	2.11	0.45		2.62	0.49	2.59
2733	*Adnp*$^{+/+}$	Saline/DD	Female	1.14	3.05	3.55	4.18	4.74	5.98	4.53	1.59	1.23	2.27	3.03	0.69		2.03	1.23	3.12
2731	*Adnp*$^{+/+}$	Saline/DD	Female	0.87	4.31	5.14	4.71	5.76	6.43	4.83	1.02	1.10	1.39	2.83	0.25		1.57	0.00	2.53
2713	*Adnp*$^{+/-}$	Saline/DD	Male	0.40	4.00	5.03	5.03	5.84	6.87	4.62	2.06	2.10	2.99	3.96	0.98	3.07	2.57	2.13	4.52
2728	*Adnp*$^{+/-}$	Saline/DD	Male	0.00	3.71	4.52	4.73	5.64	6.53	4.34	1.46	1.77	2.63	3.34	0.49	2.31	3.56	1.10	3.08
2730	*Adnp*$^{+/-}$	Saline/DD	Male	1.26	3.47	4.13	4.46	4.93	6.44	4.11	1.98	2.22	3.24	3.59	0.83	2.75	3.10	1.92	4.40
2729	*Adnp*$^{+/-}$	Saline/DD	Male	1.28	3.56	4.21	4.54	5.30	6.06	4.25	2.51	2.83	2.94	3.15	0.81	2.41	4.19	2.83	4.34
2721	*Adnp*$^{+/-}$	Saline/DD	Female	1.23	4.41	5.04	5.32	6.04	6.78	5.09	2.65	3.42	4.22	4.76	1.12		2.91	2.35	4.58
2714	*Adnp*$^{+/-}$	Saline/DD	Female	1.10	2.49	2.74	2.72	3.54	5.53	2.81	1.76	2.31	3.46	2.25	1.29		2.02	2.08	3.41
2716	*Adnp*$^{+/-}$	Saline/DD	Female	0.80	3.04	3.87	3.66	4.42	5.44	4.11	1.98	2.56	4.02	4.39	1.29		3.57	1.93	4.95
2712	*Adnp*$^{+/-}$	Saline/DD	Female	1.40	3.35	4.24	3.81	5.03	5.25	3.95	1.48	1.59	1.08	2.99	1.37		1.20	1.08	4.03
2732	*Adnp*$^{+/-}$	Saline/DD	Female	1.42	3.78	4.94	4.41	5.38	6.44	4.73	2.51	3.24	5.00	4.91	1.64		2.92	2.51	4.24
2734	*Adnp*$^{+/-}$	Saline/DD	Female	0.97	3.21	3.38	3.85	4.17	5.12	3.27	1.83	2.17	2.78	3.21	0.91		1.23	2.06	5.00
2737	*Adnp*$^{+/-}$	Saline/DD	Female	0.48	3.11	4.16	3.91	5.04	5.96	3.96	0.55	2.27	3.03	0.59	0.54		2.39	1.47	2.02
2726	*Adnp*$^{+/-}$	NAP	Male	0.31	3.00	3.82	3.83	4.89	5.48	3.63	1.52	1.19	0.58	1.13	0.09	1.76	0.32	1.31	3.58
2739	*Adnp*$^{+/-}$	NAP	Male	1.10	2.99	3.16	3.86	4.16	5.01	3.86	0.00	0.00	1.12	1.21	0.44	1.37	0.00	0.11	3.40
2753	*Adnp*$^{+/-}$	NAP	Male		2.88	3.45	3.56	3.90	4.62	2.92	0.09	0.25	1.08	2.37	0.35	0.91	1.59	0.19	2.17
2754	*Adnp*$^{+/-}$	NAP	Male	1.24	3.62	3.95	4.62	4.91	6.20	3.07	1.22	1.70	2.69	0.98	0.98	1.44	2.09	0.98	2.39
2743	*Adnp*$^{+/-}$	NAP	Female	1.79	3.26	3.45	4.05	4.63	5.65	2.19	1.02	1.42	2.52	2.84	0.18		1.14	1.15	3.64
2749	*Adnp*$^{+/-}$	NAP	Female	1.60	3.65	4.87	3.99	5.20	6.01	4.59	1.32	2.03	2.75	2.42	0.50		1.84	1.46	3.23
2748	*Adnp*$^{+/-}$	NAP	Female	0.88	4.01	4.68	4.78	5.53	6.42	4.48	1.82	1.84	3.63	3.88	0.77		2.49	1.52	4.35
2741	*Adnp*$^{+/-}$	NAP	Female	2.19	3.67	3.97	4.52	4.63	6.41	3.74	0.47	1.62	1.77	2.45	0.80		2.06	0.62	3.01
2746	*Adnp*$^{+/-}$	NAP	Female	1.54	3.01	3.21	3.66	4.79	5.48	3.65	1.25	1.97	1.84	4.04	0.34		3.47	0.77	2.58

Gene expression																		
Mouse No.	**Genotype**	**Treatment**	**Sex**	***Hsd17b2***	***Apoe***	***Gm21949***	***Lipa***	***Nlgn2***	***Pax6***	***Wfs1***	***Abcf3***	***Akt 1***	***Bmp4***	***Cdh17***	***Iba1***	***Kdm5d***	***Klf1***	***Mtor***	***Per1***
2758	*Adnp*$^{+/-}$	NAP	Female	1.47	3.13	3.56	3.87	4.20	4.47	4.35	1.44	1.37	0.11		0.00		3.09	0.63	1.89
2756	*Adnp*$^{+/-}$	NAP	Female	1.68	3.06	3.54	3.75	4.53	4.63	4.00	1.70	1.90	2.48	4.41	0.75		0.50	1.19	0.00
2750	*Adnp*$^{+/-}$	NAP	Female	1.70	3.56	4.24	4.15	4.70	6.13	3.97	1.73	2.60	4.99	3.74	0.78		3.03	1.92	5.15

Table S23. Raw data for Ultrasonic Vocalization test results.

Number of USV per minute							
***Adnp*$^{+/+}$ Male +Saline**	***Adnp*$^{+/+}$ Female +Saline**	***Adnp*$^{+/+}$ Male +NAP**	***Adnp*$^{+/+}$ Female +NAP**	***Adnp*$^{+/-}$ Male +Saline**	***Adnp*$^{+/-}$ Female +Saline**	***Adnp*$^{+/-}$ Male +NAP**	***Adnp*$^{+/-}$ Female +NAP**
11	42	1	0	0	3	108	21
1	2	21	0	3	7	123	14
24	42	6	2	0	4	38	0
52	0	7	4	3	21	1	51
6	0	4	12	2	24	18	19
11	0	37	3	19	4	3	6
2	24	58	10	11	0	34	13
4	9	11	10	2	14	39	0
37	95	34	4	4	1	48	8
1	34	7	4	0	11	36	35
17	8	0	2	22	3	13	13
12	9	6	0	0	7	2	35
0	15	50	58	0	0	40	5
2	39	12	52	4	0	0	1
14	0	25	25	31	3	101	25
4	9	9	3	17	13	46	0
10	1	4	4	1	12	4	23
0	7	0	26	23	0	42	6
17	5	42	17	0	2	95	6
35	67	15	14	27	2	39	33
3	19	5	36	0	7	66	9
6	3	48	15	2	0	27	33
0	6	24	31	10	0	15	0
2	37	33	0	15	8	57	0
54	40	13	20	34	0	48	26
0	0	10	24	3	13	34	5
6	35	33	0	11	18	4	25
25	0	23	0	0	0	26	0
4	6	4	37	20	9	8	0
0	2	3	12	0	0	21	45
25	66	1	1	4	8	0	
0	34	1	10	2	13	0	
12	18	0	0	9	3	40	
0	0	7	8	6	0	7	
1	4	82	0	10	28	0	
39	3	10	17	38	0	22	
0	0	31	12	0	0		

Number of USV per minute							
***Adnp*$^{+/+}$ Male +Saline**	***Adnp*$^{+/+}$ Female +Saline**	***Adnp*$^{+/+}$ Male +NAP**	***Adnp*$^{+/+}$ Female +NAP**	***Adnp*$^{+/-}$ Male +Saline**	***Adnp*$^{+/-}$ Female +Saline**	***Adnp*$^{+/-}$ Male +NAP**	***Adnp*$^{+/-}$ Female +NAP**
0	25	4	12	29	0		
9	13	0	3	0	15		
16	0	4	24	0	16		
0	19	19	39	1	0		
19	95	0	0	2	0		
2	0	21	0	0	24		
14	4	20	60	0	0		
1	0	14	52	**60**	3		
1	0	0	0	2	0		
53	0	19	0	27	16		
39	0	38	23	0	11		
0	0	1	9	0			
3	4	12	0	0			
39	0	21	10	6			
0	1	0	0	0			
26	1	20	0	0			
0	10	0	0	22			
0	6	0	26				
4	0	35	2				
0	0	27	2				
8	6	4	68				
32	0	0	35				
2	0	19	8				
5	3	85	0				
12	12	42	0				
0	9	2	12				
1	**441**	0	0				
0	0	0	7				
0	2	1	13				
		0	0				
		4	0				
		0	1				
		51	68				
		0	0				
		37	10				
		7	39				
		94	19				
		2	0				
		0	0				

Number of USV per minute							
Adnp$^{+/+}$ Male +Saline	*Adnp*$^{+/+}$ Female +Saline	*Adnp*$^{+/+}$ Male +NAP	*Adnp*$^{+/+}$ Female +NAP	*Adnp*$^{+/-}$ Male +Saline	*Adnp*$^{+/-}$ Female +Saline	*Adnp*$^{+/-}$ Male +NAP	*Adnp*$^{+/-}$ Female +NAP
		8	0				
		0	1				
			49				
			1				
			17				
			0				
			0				
			5				
			47				
			0				
			1				
			0				
			0				
			0				

Table S24. Raw data for developmental milestone test results.

				Developmental Milestones		
Mouse No.	Genotype	Treatment	Sex	Ear twitch	Air righting	Negative geotaxis
2973	*Adnp*$^{+/+}$	Saline/DD	Male	13	15	3
2984	*Adnp*$^{+/+}$	Saline/DD	Male	16	12	5
2983	*Adnp*$^{+/+}$	Saline/DD	Male	11	12	1
2996	*Adnp*$^{+/+}$	Saline/DD	Male	11	9	5
2994	*Adnp*$^{+/+}$	Saline/DD	Male	11	16	5
2993	*Adnp*$^{+/+}$	Saline/DD	Male	16	13	1
2992	*Adnp*$^{+/+}$	Saline/DD	Male	12	13	7
3003	*Adnp*$^{+/+}$	Saline/DD	Male	10	12	9
3019	*Adnp*$^{+/+}$	Saline/DD	Male	9	10	1
3020	*Adnp*$^{+/+}$	Saline/DD	Male	10	11	4
3021	*Adnp*$^{+/+}$	Saline/DD	Male	10	8	4
3295	*Adnp*$^{+/+}$	Saline/DD	Male	11	12	3
3296	*Adnp*$^{+/+}$	Saline/DD	Male	9	11	2
3299	*Adnp*$^{+/+}$	Saline/DD	Male	10	11	3
3307	*Adnp*$^{+/+}$	Saline/DD	Male	9	13	2
3308	*Adnp*$^{+/+}$	Saline/DD	Male	10	11	2
3315	*Adnp*$^{+/+}$	Saline/DD	Male	10	13	2
3317	*Adnp*$^{+/+}$	Saline/DD	Male	10	13	3
3324	*Adnp*$^{+/+}$	Saline/DD	Male	10	12	2
3334	*Adnp*$^{+/+}$	Saline/DD	Male	10	9	2
7S1	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	11	1

				Developmental Milestones		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Ear twitch**	**Air righting**	**Negative geotaxis**
7S2	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	11	2
8S1	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	13	2
9S5	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	12	1
11S3	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	14	6
12S1	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	14	3
12S2	*Adnp*$^{+/+}$	Saline/DD	Male	N/A	13	2
2963	*Adnp*$^{+/+}$	Saline/DD	Female	16	11	6
2968	*Adnp*$^{+/+}$	Saline/DD	Female	16	14	4
2981	*Adnp*$^{+/+}$	Saline/DD	Female	11	11	3
2977	*Adnp*$^{+/+}$	Saline/DD	Female	10	14	6
2990	*Adnp*$^{+/+}$	Saline/DD	Female	10	12	7
3001	*Adnp*$^{+/+}$	Saline/DD	Female	12	12	1
3002	*Adnp*$^{+/+}$	Saline/DD	Female	11	15	7
3055	*Adnp*$^{+/+}$	Saline/DD	Female	9	11	4
3070	*Adnp*$^{+/+}$	Saline/DD	Female	9	10	2
3066	*Adnp*$^{+/+}$	Saline/DD	Female	9	11	3
3071	*Adnp*$^{+/+}$	Saline/DD	Female	10	11	2
3309	*Adnp*$^{+/+}$	Saline/DD	Female	11	12	1
3323	*Adnp*$^{+/+}$	Saline/DD	Female	10	9	4
3327	*Adnp*$^{+/+}$	Saline/DD	Female	11	14	5
3329	*Adnp*$^{+/+}$	Saline/DD	Female	10	12	4
8S2	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	12	2
8S3	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	12	2
9S1	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	10	4
10S1	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	13	2
10S2	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	11	4
10S6	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	10	3
11S1	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	15	3
11S4	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	15	3
12S3	*Adnp*$^{+/+}$	Saline/DD	Female	N/A	13	2
2970	*Adnp*$^{+/-}$	Saline/DD	Male	13	16	11
2969	*Adnp*$^{+/-}$	Saline/DD	Male	11	15	4
2985	*Adnp*$^{+/-}$	Saline/DD	Male	10	13	7
3004	*Adnp*$^{+/-}$	Saline/DD	Male	9	13	8
3056	*Adnp*$^{+/-}$	Saline/DD	Male	8	11	6
3069	*Adnp*$^{+/-}$	Saline/DD	Male	9	9	3
3298	*Adnp*$^{+/-}$	Saline/DD	Male	10	11	7
3301	*Adnp*$^{+/-}$	Saline/DD	Male	10	13	7
3305	*Adnp*$^{+/-}$	Saline/DD	Male	10	13	6
3311	*Adnp*$^{+/-}$	Saline/DD	Male	8	9	1
3330	*Adnp*$^{+/-}$	Saline/DD	Male	9	9	4
3336	*Adnp*$^{+/-}$	Saline/DD	Male	9	9	7

				Developmental Milestones		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Ear twitch**	**Air righting**	**Negative geotaxis**
8S4	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	9	8
9S2	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	9	1
9S3	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	13	6
9S4	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	11	2
10S4	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	9	3
11S2	*Adnp*$^{+/-}$	Saline/DD	Male	N/A	16	5
2974	*Adnp*$^{+/-}$	Saline/DD	Female	12	13	7
3024	*Adnp*$^{+/-}$	Saline/DD	Female	12	11	3
3023	*Adnp*$^{+/-}$	Saline/DD	Female	11	11	8
3146	*Adnp*$^{+/-}$	Saline/DD	Female	8	11	7
3074	*Adnp*$^{+/-}$	Saline/DD	Female	8	13	8
3314	*Adnp*$^{+/-}$	Saline/DD	Female	8	15	8
3321	*Adnp*$^{+/-}$	Saline/DD	Female	8	12	2
8S5	*Adnp*$^{+/-}$	Saline/DD	Female	N/A	14	9
10S3	*Adnp*$^{+/-}$	Saline/DD	Female	N/A	11	6
10S5	*Adnp*$^{+/-}$	Saline/DD	Female	N/A	16	7
12S4	*Adnp*$^{+/-}$	Saline/DD	Female	N/A	14	5
2971	*Adnp*$^{+/+}$	NAP	Male	13	14	3
2972	*Adnp*$^{+/+}$	NAP	Male	14	13	8
2986	*Adnp*$^{+/+}$	NAP	Male	12	14	7
3005	*Adnp*$^{+/+}$	NAP	Male	12	13	5
3053	*Adnp*$^{+/+}$	NAP	Male	9	10	4
3073	*Adnp*$^{+/+}$	NAP	Male	8	8	1
3147	*Adnp*$^{+/+}$	NAP	Male	9	11	1
3294	*Adnp*$^{+/+}$	NAP	Male	11	11	3
3297	*Adnp*$^{+/+}$	NAP	Male	9	10	2
3303	*Adnp*$^{+/+}$	NAP	Male	10	10	3
3312	*Adnp*$^{+/+}$	NAP	Male	11	9	2
3333	*Adnp*$^{+/+}$	NAP	Male	10	11	4
7N1	*Adnp*$^{+/+}$	NAP	Male	N/A	11	2
7N3	*Adnp*$^{+/+}$	NAP	Male	N/A	9	2
8N3	*Adnp*$^{+/+}$	NAP	Male	N/A	10	2
9N3	*Adnp*$^{+/+}$	NAP	Male	N/A	8	2
9N4	*Adnp*$^{+/+}$	NAP	Male	N/A	8	2
10N1	*Adnp*$^{+/+}$	NAP	Male	N/A	9	1
11N5	*Adnp*$^{+/+}$	NAP	Male	N/A	11	2
2966	*Adnp*$^{+/+}$	NAP	Female	14	12	5
2975	*Adnp*$^{+/+}$	NAP	Female	11	11	5
2980	*Adnp*$^{+/+}$	NAP	Female	14	15	5
2991	*Adnp*$^{+/+}$	NAP	Female	12	11	2
2988	*Adnp*$^{+/+}$	NAP	Female	11	13	3
2999	*Adnp*$^{+/+}$	NAP	Female	12	13	7

				Developmental Milestones		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Ear twitch**	**Air righting**	**Negative geotaxis**
3054	*Adnp*$^{+/+}$	NAP	Female	9	8	2
3025	*Adnp*$^{+/+}$	NAP	Female	9	10	3
3018	*Adnp*$^{+/+}$	NAP	Female	8	10	3
3068	*Adnp*$^{+/+}$	NAP	Female	7	11	1
3302	*Adnp*$^{+/+}$	NAP	Female	11	12	2
3304	*Adnp*$^{+/+}$	NAP	Female	10	9	2
3306	*Adnp*$^{+/+}$	NAP	Female	10	11	4
3313	*Adnp*$^{+/+}$	NAP	Female	8	9	2
3318	*Adnp*$^{+/+}$	NAP	female	7	9	2
3319	*Adnp*$^{+/+}$	NAP	female	10	10	2
3331	*Adnp*$^{+/+}$	NAP	Female	10	9	4
3332	*Adnp*$^{+/+}$	NAP	Female	11	11	3
3335	*Adnp*$^{+/+}$	NAP	Female	9	10	2
8N1	*Adnp*$^{+/+}$	NAP	Female	N/A	9	2
9N5	*Adnp*$^{+/+}$	NAP	Female	N/A	8	1
10N6	*Adnp*$^{+/+}$	NAP	Female	N/A	10	3
11N1	*Adnp*$^{+/+}$	NAP	Female	N/A	10	3
11N2	*Adnp*$^{+/+}$	NAP	Female	N/A	8	3
12N1	*Adnp*$^{+/+}$	NAP	Female	N/A	8	3
12N3	*Adnp*$^{+/+}$	NAP	Female	N/A	9	3
2995	*Adnp*$^{+/-}$	NAP	Male	9	13	7
2982	*Adnp*$^{+/-}$	NAP	Male	11	11	5
3065	*Adnp*$^{+/-}$	NAP	Male	8	10	6
3017	*Adnp*$^{+/-}$	NAP	Male	8	10	3
3067	*Adnp*$^{+/-}$	NAP	Male	7	11	4
3300	*Adnp*$^{+/-}$	NAP	Male	9	12	3
3316	*Adnp*$^{+/-}$	NAP	Male	7	11	5
3328	*Adnp*$^{+/-}$	NAP	Male	8	12	7
7N2	*Adnp*$^{+/-}$	NAP	Male	N/A	10	2
8N4	*Adnp*$^{+/-}$	NAP	Male	N/A	8	1
8N5	*Adnp*$^{+/-}$	NAP	Male	N/A	9	6
9N2	*Adnp*$^{+/-}$	NAP	Male	N/A	11	5
10N4	*Adnp*$^{+/-}$	NAP	Male	N/A	10	5
12N4	*Adnp*$^{+/-}$	NAP	Male	N/A	8	2
12N5	*Adnp*$^{+/-}$	NAP	Male	N/A	8	2
2964	*Adnp*$^{+/-}$	NAP	Female	13	13	10
2965	*Adnp*$^{+/-}$	NAP	Female	12	11	8
2967	*Adnp*$^{+/-}$	NAP	Female	8	12	9
2976	*Adnp*$^{+/-}$	NAP	Female	12	8	7
2978	*Adnp*$^{+/-}$	NAP	Female	11	12	2
2979	*Adnp*$^{+/-}$	NAP	Female	12	13	6
2989	*Adnp*$^{+/-}$	NAP	Female	8	11	9

				Developmental Milestones		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Ear twitch**	**Air righting**	**Negative geotaxis**
2987	*Adnp*$^{+/-}$	NAP	Female	10	10	2
2998	*Adnp*$^{+/-}$	NAP	Female	9	14	4
3000	*Adnp*$^{+/-}$	NAP	Female	9	13	6
2997	*Adnp*$^{+/-}$	NAP	Female	10	15	8
3057	*Adnp*$^{+/-}$	NAP	Female	8	11	6
3148	*Adnp*$^{+/-}$	NAP	Female	8	11	2
3072	*Adnp*$^{+/-}$	NAP	Female	7	9	3
3075	*Adnp*$^{+/-}$	NAP	Female	7	10	3
3310	*Adnp*$^{+/-}$	NAP	Female	10	10	2
3320	*Adnp*$^{+/-}$	NAP	Female	9	12	1
3322	*Adnp*$^{+/-}$	NAP	Female	7	12	2
3325	*Adnp*$^{+/-}$	NAP	Female	10	12	6
3326	*Adnp*$^{+/-}$	NAP	Female	10	13	3
8N2	*Adnp*$^{+/-}$	NAP	Female	N/A	10	2
9N1	*Adnp*$^{+/-}$	NAP	Female	N/A	11	1
10N2	*Adnp*$^{+/-}$	NAP	Female	N/A	8	7
10N3	*Adnp*$^{+/-}$	NAP	Female	N/A	10	3
10N5	*Adnp*$^{+/-}$	NAP	Female	N/A	10	2
11N3	*Adnp*$^{+/-}$	NAP	Female	N/A	8	4
11N4	*Adnp*$^{+/-}$	NAP	Female	N/A	11	4
12N2	*Adnp*$^{+/-}$	NAP	Female	N/A	10	2

Table S25. Raw data for Weight measurement results.

Weight (gr)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
2973	*Adnp*$^{+/+}$	Saline/DD	1.80	2.10	2.60	2.90	3.50	4.00	4.70	5.00	5.50	6.10	6.50	6.90	7.30	7.80	8.00	8.30	8.80	9.20	10.10	10.80	11.90	13.43
2984	*Adnp*$^{+/+}$	Saline/DD	2.02	2.20	2.40	3.00	3.20	3.80	4.30	5.00	5.10	5.60	5.90	6.20	6.70	6.90	7.10	7.10	7.70	8.20	8.40	9.10	10.20	11.27
2983	*Adnp*$^{+/+}$	Saline/DD	2.06	2.30	2.50	2.90	3.20	3.60	4.20	4.80	5.20	5.30	5.70	5.50	6.00	6.00	6.30	6.60	7.10	7.30	7.40	7.60	8.80	9.44
2996	*Adnp*$^{+/+}$	Saline/DD	2.17	2.40	2.90	3.60	3.90	4.70	5.40	6.00	6.60	7.20	7.90	8.40	8.90	9.20	9.70	9.50	9.60	9.90	11.20	12.50	14.16	15.76
2994	*Adnp*$^{+/+}$	Saline/DD	1.92	2.10	2.60	3.30	3.80	4.60	5.30	5.90	6.20	6.90	7.50	7.90	8.20	8.60	8.60	8.60	8.60	8.70	9.90	11.00	12.32	13.88
2993	*Adnp*$^{+/+}$	Saline/DD	1.95	2.20	2.60	3.20	3.70	4.40	4.90	5.60	6.00	6.90	7.40	8.00	8.50	8.90	9.20	9.40	9.40	9.60	10.90	11.90	13.30	14.72
2992	*Adnp*$^{+/+}$	Saline/DD	2.05	2.30	2.80	3.40	4.00	4.70	5.30	5.90	6.10	7.00	7.30	8.00	8.30	8.70	8.80	9.20	9.10	9.30	10.60	11.60	13.20	14.50
3003	*Adnp*$^{+/+}$	Saline/DD	1.63	1.90	2.20	2.70	3.20	3.70	4.30	5.00	5.40	6.40	6.90	7.60	8.20	8.20	8.80	9.10	9.60	9.80	10.30	11.70	13.10	14.50
3019	*Adnp*$^{+/+}$	Saline/DD	1.70	2.08	2.45	3.00	3.46	3.70	4.05	4.50	5.01	5.19	5.91	6.18	6.40	6.88	7.17	7.54	8.24	9.01	9.50	10.38	11.11	12.20
3020	*Adnp*$^{+/+}$	Saline/DD	1.80	2.06	2.50	3.11	3.53	3.88	4.44	4.53	4.91	5.77	6.04	6.65	6.79	7.07	7.67	7.90	8.41	9.33	10.04	10.63	11.62	12.44
3021	*Adnp*$^{+/+}$	Saline/DD	1.80	2.11	2.43	2.45	3.64	3.74	4.26	5.10	5.50	6.28	6.32	6.81	7.07	7.31	7.31	7.62	8.28	8.84	9.71	9.96	11.03	12.09
7S1	*Adnp*$^{+/+}$	Saline/DD	2.10	2.68	3.24	3.69	4.35	4.97	5.52	6.13	6.63	7.32	8.02	8.49	9.25	9.94	10.51	10.70	11.45	12.17	13.05	13.06	14.60	15.80
7S2	*Adnp*$^{+/+}$	Saline/DD	2.01	2.66	3.12	3.74	4.19	4.76	5.61	6.08	6.66	7.42	8.09	8.51	9.22	10.15	10.74	10.85	12.00	12.40	13.12	14.11	14.53	15.82
8S1	*Adnp*$^{+/+}$	Saline/DD	1.91	2.22	2.69	3.18	3.81	4.56	5.12	5.90	6.15	6.65	7.00	7.71	8.06	8.46	8.90	9.21	9.74	10.31	11.20	12.51	13.50	14.38
9S5	*Adnp*$^{+/+}$	Saline/DD		2.26	2.68	3.14	3.64	4.16	4.61	4.91	5.46	6.15	6.93	7.11	7.42	7.81	8.08	8.44	8.76	9.31	9.84	10.63	11.97	12.83
11S3	*Adnp*$^{+/+}$	Saline/DD		1.96	2.34	2.82	3.29	3.72	4.13	4.60	5.11	5.50	6.12	6.69	7.14	7.57	7.90	8.24	8.86	9.36	9.93	10.72		
12S1	*Adnp*$^{+/+}$	Saline/DD		2.40	2.71	3.21	3.77	4.39	5.13	6.07	6.69	7.69	8.13	8.69	9.00	9.57	10.10	10.85	10.72	11.34	12.21	13.44	14.09	
12S2	*Adnp*$^{+/+}$	Saline/DD		2.37	2.81	3.27	3.76	4.41	5.14	5.82	6.65	7.44	8.07	8.88	9.57	10.17	11.08	10.65	11.77	12.10	13.14	14.17	14.62	
2963	*Adnp*$^{+/+}$	Saline/DD	1.84	2.22	2.60	3.10	3.80	4.30	4.70	5.40	6.10	6.60	6.80	7.40	7.90	8.40	8.60	9.00	9.50	10.00	10.90	11.50	12.10	13.25
2968	*Adnp*$^{+/+}$	Saline/DD	1.78	2.22	2.60	3.00	3.60	4.10	4.90	5.40	6.00	6.50	7.00	7.60	7.80	8.30	8.50	9.10	9.40	9.80	10.70	11.50	11.90	12.89
2981	*Adnp*$^{+/+}$	Saline/DD	1.80	2.10	2.40	2.90	3.10	3.60	4.20	4.80	5.00	4.90	5.20	5.70	6.10	6.00	6.30	6.30	6.60	6.70	7.30	7.60	9.20	10.03
2977	*Adnp*$^{+/+}$	Saline/DD	1.97	2.20	2.60	2.90	3.20	3.80	3.90	4.50	4.70	5.20	5.60	6.10	6.40	6.70	6.80	6.80	7.10	7.40	7.80	8.80	10.00	11.01
2990	*Adnp*$^{+/+}$	Saline/DD	2.13	2.30	2.90	3.50	3.90	4.60	5.20	6.00	6.50	7.10	7.70	8.40	8.70	9.00	9.30	9.40	9.40	9.60	10.70	11.70	13.20	14.31
3001	*Adnp*$^{+/+}$	Saline/DD	1.70	1.90	2.10	2.70	3.20	3.80	4.40	5.00	5.40	6.10	6.90	7.10	7.70	8.10	8.90	9.20	9.40	9.70	10.40	11.10	12.50	13.32
3002	*Adnp*$^{+/+}$	Saline/DD	1.76	1.90	2.20	2.60	3.00	3.80	4.30	5.00	5.50	6.20	6.60	7.50	8.00	8.30	9.00	9.20	9.50	9.70	10.20	11.20	12.30	13.38
3055	*Adnp*$^{+/+}$	Saline/DD	1.61	1.79	2.02	2.51	2.97	3.16	3.72	4.24	4.42	4.70	5.21	5.59	5.81	6.03	6.27	6.67	7.02	7.57	8.09	9.11	9.77	10.59
3066	*Adnp*$^{+/+}$	Saline/DD	1.75	2.06	2.48	2.95	3.56	4.03	4.88	5.39	5.60	6.05	6.74	7.08	7.23	7.93	7.86	8.09	8.73	9.15	10.00	10.39	11.57	12.13
3070	*Adnp*$^{+/+}$	Saline/DD	1.59	1.76	2.26	2.78	3.10	3.67	4.09	4.58	5.03	5.55	6.10	6.57	6.69	7.28	7.65	7.61	7.86	8.28	8.65	8.53	8.98	9.57

Weight (gr)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
3071	*Adnp*$^{+/+}$	Saline/DD	1.71	1.89	2.41	2.86	3.10	3.54	4.25	4.62	5.05	5.60	6.08	6.53	6.71	6.99	7.46	7.74	7.65	7.76	7.94	8.11	8.75	9.26
8S2	*Adnp*$^{+/+}$	Saline/DD	1.93	2.32	2.77	3.24	3.98	4.71	5.25	5.90	6.60	6.83	7.09	7.54	8.06	8.38	8.92	9.43	9.75	10.33	11.16	12.44	12.92	13.63
8S3	*Adnp*$^{+/+}$	Saline/DD	1.86	2.15	2.61	3.04	3.56	4.34	4.82	5.51	6.37	6.47	6.93	7.60	8.12	8.31	9.06	9.39	9.88	10.17	11.48	12.28	12.84	13.49
9S1	*Adnp*$^{+/+}$	Saline/DD		2.17	2.33	2.98	3.37	3.85	4.23	4.77	5.30	6.02	6.59	7.04	7.19	7.68	7.87	8.34	8.40	9.07	10.20	10.87	12.03	13.02
10S1	*Adnp*$^{+/+}$	Saline/DD	1.94	2.23	2.63	3.03	3.43	4.08	4.30	4.92	5.36	5.56	6.31	6.41	7.01	7.71	7.50	7.68	8.33	8.82	9.50	10.48	11.25	11.95
10S2	*Adnp*$^{+/+}$	Saline/DD	1.59	2.06	2.32	2.82	3.32	3.74	4.07	4.56	4.79	5.40	5.53	6.13	6.75	7.13	6.90	7.03	7.22	7.71	8.15	8.61	9.84	10.52
10S6	*Adnp*$^{+/+}$	Saline/DD	1.82	2.07	2.36	2.91	3.49	3.77	4.48	5.00	5.24	5.75	6.01	6.40	6.95	7.42	7.47	7.98	8.11	8.75	9.20	10.39	10.83	11.67
11S1	*Adnp*$^{+/+}$	Saline/DD		1.83	2.14	2.37	2.92	3.14	3.64	4.13	4.47	4.92	5.46	6.16	6.59	6.94	7.32	7.71	8.15	8.66	9.29	9.40		
11S4	*Adnp*$^{+/+}$	Saline/DD		2.05	2.28	2.74	3.28	3.77	4.21	5.01	5.31	5.85	6.48	7.17	7.55	8.12	8.58	9.12	9.33	9.90	10.36	10.91		
12S3	*Adnp*$^{+/+}$	Saline/DD		2.29	2.67	3.20	3.76	4.41	5.08	5.98	6.59	7.20	7.92	8.46	9.49	9.76	10.44	10.53	11.13	11.79	12.49	13.51	14.50	
2970	*Adnp*$^{+/-}$	Saline/DD	1.70	1.97	2.30	2.70	3.20	3.70	4.40	4.60	5.40	5.60	6.10	6.10	6.60	6.60	6.90	6.90	7.50	7.50	8.40	9.40	10.30	11.48
2969	*Adnp*$^{+/-}$	Saline/DD	1.64	1.94	2.20	2.60	3.30	3.70	4.10	4.70	4.90	5.00	5.50	5.80	6.50	6.80	7.60	7.80	8.10	8.00	8.40	9.30	9.60	10.97
2985	*Adnp*$^{+/-}$	Saline/DD	1.92	2.10	2.50	2.80	3.20	3.70	4.40	5.00	5.10	5.30	5.70	6.00	6.40	6.30	6.30	6.50	6.90	7.00	7.30	7.50	8.70	9.60
3004	*Adnp*$^{+/-}$	Saline/DD	1.50	1.70	2.00	2.50	2.90	3.50	4.00	4.80	5.10	5.80	6.20	6.70	7.30	7.80	8.20	8.60	8.90	8.70	9.00	9.90	11.00	12.00
3056	*Adnp*$^{+/-}$	Saline/DD	1.70	2.04	2.40	2.86	3.37	3.58	4.36	4.53	5.24	5.43	5.64	6.24	6.80	7.24	7.43	7.77	8.29	8.72	9.78	10.62	11.57	12.32
3069	*Adnp*$^{+/-}$	Saline/DD	1.64	1.85	2.57	2.69	3.11	3.49	4.03	4.37	4.87	5.36	5.48	6.09	6.43	6.87	6.82	6.86	7.43	8.01	8.48	8.53	9.45	10.30
8S4	*Adnp*$^{+/-}$	Saline/DD	1.81	2.23	2.80	3.32	3.88	4.54	5.04	5.76	6.38	7.09	7.79	8.02	8.33	8.74	8.78	9.18	9.54	10.56	11.07	12.13	12.60	13.37
9S2	*Adnp*$^{+/-}$	Saline/DD		1.99	2.25	2.65	3.09	3.36	3.72	4.09	4.61	5.51	5.70	6.04	6.36	6.83	7.22	7.10	7.34	7.57	8.32	9.52	10.59	11.55
9S3	*Adnp*$^{+/-}$	Saline/DD		2.16	2.48	2.92	3.50	3.84	4.25	4.61	5.44	6.51	6.85	7.03	7.38	7.61	8.01	8.11	8.32	8.76	9.79	11.09	12.23	13.16
9S4	*Adnp*$^{+/-}$	Saline/DD		2.26	2.80	3.10	3.60	4.09	4.45	4.78	5.30	6.09	6.56	6.78	7.03	7.48	7.93	7.98	8.07	8.48	8.93	9.43	10.50	11.89
10S4	*Adnp*$^{+/-}$	Saline/DD	1.50	2.07	2.36	2.82	3.26	3.71	4.18	4.63	4.72	5.40	5.64	6.21	6.85	6.55	6.95	6.80	7.45	7.84	8.35	9.03	10.02	10.99
11S2	*Adnp*$^{+/-}$	Saline/DD		1.97	2.34	2.70	3.20	3.56	4.00	4.52	4.86	5.24	5.75	6.43	6.89	7.41	7.57	7.73	8.19	8.74	9.28	10.28		
2974	*Adnp*$^{+/-}$	Saline/DD	1.77	2.00	2.30	2.60	3.00	3.50	3.70	4.60	4.90	5.20	5.70	5.50	5.80	6.20	6.00	6.30	6.50	6.60	7.00	7.20	8.00	8.64
3023	*Adnp*$^{+/-}$	Saline/DD	1.40	1.64	1.84	1.97	2.61	2.69	3.15	3.97	4.43	4.64	4.75	5.17	5.31	5.42	5.90	6.30	6.60	7.08	7.45	7.93	8.55	9.37
3024	*Adnp*$^{+/-}$	Saline/DD	1.40	1.55	1.76	2.08	2.09	2.25	2.79	2.98	3.19	3.57	3.96	4.15	4.22	4.30	4.51	4.75	5.18	5.53	6.08	6.47	7.13	7.91
3074	*Adnp*$^{+/-}$	Saline/DD	1.54	1.77	2.11	2.52	2.75	3.28	3.90	4.18	4.47	4.97	5.24	6.26	6.49	6.49	6.85	6.63	6.80	7.39	7.49	7.99	8.10	8.72
3146	*Adnp*$^{+/-}$	Saline/DD	1.54	1.81	2.02	2.31	2.53	3.18	3.59	3.98	4.35	4.42	4.68	5.32	6.05	6.42	6.66	6.95	7.14	7.46	7.87	8.12	9.05	9.60
8S5	*Adnp*$^{+/-}$	Saline/DD	1.62	1.90	2.25	2.63	2.85	3.53	3.95	4.55	4.71	5.07	5.41	6.08	6.49	6.67	7.08	7.37	7.89	8.22	9.16	10.02	10.46	11.45
10S3	*Adnp*$^{+/-}$	Saline/DD	1.70	1.95	2.19	2.73	2.90	3.24	3.58	4.17	4.29	4.92	4.85	5.30	5.44	6.17	5.83	6.22	6.31	6.61	7.33	7.57	8.44	9.32
10S5	*Adnp*$^{+/-}$	Saline/DD	1.59	1.36	1.46	1.82	1.97	2.15	2.40	2.69	3.23	3.60	3.80	4.41	4.55	4.72	5.08	5.03	5.19	5.37	5.55	5.82	6.00	7.02

Weight (gr)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
12S4	*Adnp*$^{+/-}$	Saline/DD		2.06	2.56	2.99	3.40	4.14	4.84	5.65	6.47	7.17	8.22	8.80	9.42	9.74	11.09	11.06	11.60	11.86	12.68	13.35	14.46	
2971	*Adnp*$^{+/+}$	NAP	1.80	2.20	2.60	3.00	3.50	4.20	4.60	5.10	5.60	5.90	6.40	6.80	7.20	7.70	7.80	8.20	8.60	9.10	10.10	10.80	11.60	12.90
2972	*Adnp*$^{+/+}$	NAP	1.90	2.57	2.60	2.90	3.50	4.10	4.80	5.30	6.00	6.40	6.80	7.20	7.50	7.70	8.20	8.50	9.30	9.50	10.70	11.40	12.30	13.73
2986	*Adnp*$^{+/+}$	NAP	1.81	2.00	2.40	2.70	3.00	3.60	3.90	4.70	5.10	5.70	6.00	6.10	6.10	6.30	6.50	6.80	7.10	7.30	7.70	8.10	9.24	9.95
3005	*Adnp*$^{+/+}$	NAP	1.72	2.00	2.20	2.80	3.20	3.90	4.40	5.10	5.50	6.40	7.10	7.50	8.10	8.50	9.30	9.40	10.00	10.00	10.80	11.70	12.80	14.36
3053	*Adnp*$^{+/+}$	NAP	1.70	1.96	2.38	2.86	3.57	3.91	4.49	4.88	5.33	5.75	6.52	7.01	7.31	7.93	8.22	8.40	8.90	10.09	10.82	11.57	12.50	13.46
3073	*Adnp*$^{+/+}$	NAP	1.71	2.01	2.43	2.93	3.22	3.81	4.29	4.70	5.40	6.07	6.77	7.25	7.39	7.84	8.02	8.24	9.34	9.53	10.46	11.13	12.04	12.70
3147	*Adnp*$^{+/+}$	NAP	1.77	2.05	2.50	3.13	3.41	3.91	4.52	4.81	5.30	6.20	6.57	7.00	7.24	7.98	8.21	8.67	9.03	9.66	10.64	11.08	12.13	13.01
7N1	*Adnp*$^{+/+}$	NAP	1.32	1.72	2.18	2.73	3.17	3.87	4.56	5.01	5.71	6.56	7.32	7.59	8.44	9.19	9.76	10.25	10.96	11.89	12.43	13.04	13.49	14.72
7N3	*Adnp*$^{+/+}$	NAP	1.92	2.41	2.96	3.48	4.13	4.63	5.06	5.88	6.52	7.14	7.68	8.26	9.00	9.78	10.13	10.52	11.43	12.07	12.32	12.99	13.56	14.67
8N3	*Adnp*$^{+/+}$	NAP	1.97	2.34	2.76	3.20	3.80	4.50	5.12	5.77	6.41	6.54	6.81	7.65	8.16	8.43	8.91	9.16	9.56		11.12	11.78	12.52	13.18
9N3	*Adnp*$^{+/+}$	NAP		2.34	2.78	3.20	3.43	3.93	4.41	4.85	5.30	6.15	6.73	7.01	7.25	7.71	7.96	8.15	8.49	9.21	10.22	11.49	12.54	13.68
9N4	*Adnp*$^{+/+}$	NAP		2.18	2.60	3.05	3.46	3.84	4.31	4.74	5.22	6.01	6.30	6.62	6.91	7.25	7.75	8.15	8.48	8.76	9.90	11.14	11.89	12.85
10N1	*Adnp*$^{+/+}$	NAP	1.80	2.29	2.56	3.09	3.51	3.88	4.32	4.95	5.82	6.14	6.85	6.70	6.98	7.84	8.02	7.61	8.21	8.08	8.74	9.46	10.15	11.27
11N5	*Adnp*$^{+/+}$	NAP		2.10	2.41	2.91	3.41	3.83	4.21	4.84	5.11	5.57	6.07	6.71	7.17	7.67	8.03	8.32	9.21	9.67	10.33	10.73		
2966	*Adnp*$^{+/+}$	NAP	1.38	1.68	2.00	2.30	2.80	3.20	3.90	4.20	4.50	5.00	5.60	5.90	6.30	6.50	7.10	7.20	7.60	7.70	8.40	8.80	9.50	10.44
2975	*Adnp*$^{+/+}$	NAP	1.89	2.10	2.50	2.90	3.30	3.80	4.30	4.70	5.30	6.20	6.40	7.00	7.50	7.60	7.90	8.30	8.40	8.60	8.90	10.20	11.40	12.20
2980	*Adnp*$^{+/+}$	NAP	1.97	2.10	2.50	2.90	3.30	4.00	4.40	5.00	5.40	6.20	6.30	6.30	7.00	6.90	7.30	7.50	7.80	8.00	8.20	8.70	10.20	10.70
2991	*Adnp*$^{+/+}$	NAP	1.92	2.20	2.70	3.30	3.80	4.60	5.10	5.90	6.30	6.90	7.40	7.90	8.30	8.40	8.70	9.00	8.90	9.20	10.40	11.30	12.60	13.60
2988	*Adnp*$^{+/+}$	NAP	2.05	2.30	2.70	3.30	3.90	4.60	5.00	5.70	6.30	7.00	7.40	7.90	8.50	8.90	9.10	9.20	9.20	9.00	10.60	11.50	12.66	13.76
2999	*Adnp*$^{+/+}$	NAP	1.63	1.90	2.20	2.70	3.30	3.90	4.40	5.20	5.50	6.30	7.10	7.60	8.10	8.40	9.10	9.30	9.50	9.70	10.80	11.60	12.60	13.69
3018	*Adnp*$^{+/+}$	NAP	1.50	1.84	2.21	2.68	3.24	3.64	4.40	4.80	5.36	5.58	6.50	6.79	7.27	7.55	7.75	8.37	8.52	9.22	10.10	10.69	11.50	11.64
3025	*Adnp*$^{+/+}$	NAP	1.60	1.92	2.20	2.90	3.14	3.55	4.15	4.59	4.72	5.29	5.50	6.15	6.65	6.95	7.27	7.58	8.02	8.34	9.45	10.10	10.85	11.63
3054	*Adnp*$^{+/+}$	NAP	1.51	1.82	2.18	2.49	3.10	3.40	4.02	4.52	4.68	5.05	5.55	6.00	6.31	6.71	6.81	7.23	7.82	8.01	9.13	9.54	10.50	10.85
3068	*Adnp*$^{+/+}$	NAP	1.60	1.76	2.30	2.77	3.06	3.69	4.32	4.84	5.32	6.15	6.44	6.51	6.97	7.32	7.77	8.05	7.90	8.47	8.81	9.08	9.54	10.32
8N1	*Adnp*$^{+/+}$	NAP	1.73	2.12	2.44	2.92	3.56	4.27	4.71	5.32	5.46	5.24	5.76	6.59	7.23	7.44	8.10	8.46	9.01	9.77	10.57	11.38	12.07	12.69
9N5	*Adnp*$^{+/+}$	NAP		2.17	2.60	2.99	3.58	3.96	4.40	4.92	5.33	6.26	6.46	6.82	7.05	7.05	7.73	8.22	8.32	8.59	9.20	10.40	11.26	11.76
10N6	*Adnp*$^{+/+}$	NAP	1.62	1.97	2.20	2.70	3.01	3.40	3.64	4.37	5.28	5.60	6.10	6.22	6.48	7.15	7.29	7.48	7.85	8.02	8.45	8.93	9.98	10.96
11N1	*Adnp*$^{+/+}$	NAP		2.07	2.28	2.80	3.22	3.74	4.43	4.94	5.28	5.72	6.27	6.91	7.31	7.74	8.39	8.71	9.41	10.13	10.72	11.10		
11N2	*Adnp*$^{+/+}$	NAP		1.93	2.14	2.52	2.92	3.43	3.77	4.20	4.59	5.16	5.70	6.32	6.74	7.26	7.55	7.97	8.18	8.66	8.58	8.57		

Weight (gr)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
12N1	*Adnp*$^{+/+}$	NAP		2.38	2.71	3.27	3.78	4.47	5.21	5.94	6.78	7.44	8.18	9.06	9.93	10.57	10.29	10.88	11.69	12.11	12.69	12.95	13.82	
12N3	*Adnp*$^{+/+}$	NAP		2.16	2.43	2.92	3.34	4.20	4.82	5.74	6.22	7.05	7.83	8.22	8.77	9.38	9.57	9.60	10.58	11.22	11.80	12.46	13.57	
2995	*Adnp*$^{+/-}$	NAP	1.95	2.20	2.60	3.10	3.60	4.30	4.80	5.40	5.80	6.40	6.70	7.20	7.40	7.70	8.00	8.30	8.10	7.90	8.10	10.20	11.62	12.57
2982	*Adnp*$^{+/-}$	NAP	1.91	2.20	2.50	2.90	3.10	3.80	4.40	4.80	5.30	5.70	6.20	6.70	6.90	7.20	7.20	7.50	7.50	7.80	8.00	8.50	9.60	10.50
3017	*Adnp*$^{+/-}$	NAP	1.60	1.98	2.22	2.72	3.17	3.39	4.06	4.70	5.18	5.54	5.71	6.27	6.66	7.19	7.35	7.44	8.04	8.28	9.24	9.85	11.26	11.97
3065	*Adnp*$^{+/-}$	NAP	1.10	1.46	1.65	1.94	2.17	2.20	2.49	2.93	2.99	3.05	2.88	3.31	3.13	3.36	3.38	3.65	3.84	3.90	4.31	4.62	4.86	5.16
3067	*Adnp*$^{+/-}$	NAP	1.31	1.52	1.95	2.31	2.59	3.06	3.69	4.14	4.40	5.11	5.34	5.43	5.62	6.02	5.94	6.20	6.60	7.08	7.50	7.71	8.31	9.20
7N2	*Adnp*$^{+/-}$	NAP	1.87	2.30	2.83	3.40	3.88	4.35	4.89	5.47	6.22	6.80	7.44	7.78	8.44	8.99	9.38	9.64	10.28	11.28	11.86	13.12	13.76	14.81
8N4	*Adnp*$^{+/-}$	NAP	1.76	2.15	2.65	3.08	3.65	4.11	4.57	5.00	5.02	5.59	5.84	6.55	7.00	6.95	7.55	8.05	8.39	10.08	9.83	11.08	11.93	12.56
8N5	*Adnp*$^{+/-}$	NAP	1.69	2.08	2.52	2.96	3.44	4.12	4.53	5.04	5.64	6.31	6.48	7.07	7.45	7.64	7.72	8.17	8.77	9.12	10.12	11.11	11.99	12.45
9N2	*Adnp*$^{+/-}$	NAP		2.15	2.63	2.95	3.53	3.90	4.37	4.66	5.06	5.67	6.15	6.48	6.70	6.92	7.36	7.57	7.82	8.71	9.73	11.00	11.95	13.18
10N4	*Adnp*$^{+/-}$	NAP	1.60	1.78	2.04	2.49	2.90	3.23	3.88	4.44	4.26	4.82	5.03	5.44	6.00	6.42	6.26	6.60	6.72	7.30	7.64	8.23	8.56	8.79
12N4	*Adnp*$^{+/-}$	NAP		2.29	2.63	3.04	3.62	4.21	4.88	5.71	6.43	7.11	7.62	7.88	8.48	9.08	9.55	9.68	10.22	11.01	11.54	12.04	13.28	
12N5	*Adnp*$^{+/-}$	NAP		2.05	2.48	2.95	3.37	4.11	4.61	5.44	6.31	6.73	7.26	7.82	8.10	8.81	9.03	8.76	9.65	10.01	10.67	11.65	12.70	
2964	*Adnp*$^{+/-}$	NAP	1.52	1.92	2.20	2.60	3.30	3.60	4.10	4.50	5.20	5.40	5.90	6.00	6.60	6.80	7.30	7.40	7.50	7.70	8.20	9.00	9.60	10.73
2965	*Adnp*$^{+/-}$	NAP	1.46	1.74	1.90	2.30	2.80	3.30	3.60	4.10	4.40	5.00	5.60	5.60	5.90	6.20	6.60	7.10	7.20	7.40	8.10	8.90	9.40	10.59
2967	*Adnp*$^{+/-}$	NAP	1.64	2.02	2.40	2.80	3.30	3.70	4.20	4.50	5.00	5.30	5.90	6.20	6.50	6.70	7.00	7.40	7.60	7.80	8.60	9.30	9.90	10.58
2976	*Adnp*$^{+/-}$	NAP	1.64	1.80	2.10	2.40	2.60	3.10	3.50	4.00	4.20	5.00	5.20	5.30	5.30	5.30	5.40	5.70	5.90	5.90	6.00	6.20	7.00	7.36
2978	*Adnp*$^{+/-}$	NAP	1.66	1.90	2.20	2.60	2.90	3.50	3.80	4.60	4.70	5.60	5.70	6.30	6.00	6.00	6.20	6.70	6.90	7.30	7.60	8.20	9.40	10.07
2979	*Adnp*$^{+/-}$	NAP	1.65	1.80	2.10	2.50	2.70	3.30	3.60	4.20	4.60	4.90	5.00	5.20	5.70	5.30	5.50	5.70	5.90	5.90	6.40	6.50	7.56	7.76
2989	*Adnp*$^{+/-}$	NAP	1.76	1.90	2.40	2.90	3.40	4.00	4.40	5.20	5.60	6.30	6.60	7.20	7.40	7.80	8.10	8.50	8.10	8.40	9.20	10.10	11.20	12.40
2987	*Adnp*$^{+/-}$	NAP	1.74	2.00	2.40	3.00	3.50	4.30	4.70	5.40	5.80	6.40	6.70	7.30	7.80	8.40	8.50	8.70	8.60	8.50	9.60	10.50	11.60	12.86
2998	*Adnp*$^{+/-}$	NAP	1.47	1.70	1.90	2.40	2.90	3.50	3.90	4.60	5.00	5.80	6.10	6.60	7.00	7.30	8.20	8.40	8.70	8.80	9.40	10.30	11.20	12.46
3000	*Adnp*$^{+/-}$	NAP	1.50	1.70	1.90	2.40	2.70	3.50	4.00	4.60	5.10	5.70	6.10	6.90	7.30	7.80	8.40	8.60	8.80	8.90	9.80	10.50	11.63	12.57
2997	*Adnp*$^{+/-}$	NAP	1.53	1.80	2.10	2.60	3.00	3.70	4.20	5.00	5.30	5.90	6.40	6.90	7.50	7.80	8.40	8.70	8.90	8.90	9.60	10.40	11.30	12.22
3057	*Adnp*$^{+/-}$	NAP	1.60	1.57	1.84	2.26	2.54	2.65	3.42	3.62	3.84	4.24	4.50	4.87	5.30	5.82	5.85	6.05	6.26	6.64	7.51	7.93	8.60	9.63
3072	*Adnp*$^{+/-}$	NAP	1.57	1.76	2.03	2.57	2.86	3.21	3.98	4.42	4.97	5.41	5.77	5.96	6.37	6.71	6.70	7.17	7.57	8.01	8.51	8.96	9.78	10.39
3075	*Adnp*$^{+/-}$	NAP	1.38	1.53	2.03	2.36	2.56	3.15	3.67	4.23	4.45	5.13	5.81	5.86	6.15	6.33	6.32	6.43	6.80	7.06	7.78	8.00	8.80	9.43
3148	*Adnp*$^{+/-}$	NAP	1.42	1.56	1.99	2.36	2.55	3.17	3.61	3.94	4.21	4.21	4.53	5.12	5.00	5.31	5.80	6.45	6.63	6.95	7.03	7.33	7.95	8.94
8N2	*Adnp*$^{+/-}$	NAP	1.86	2.24	2.72	3.14	3.66	4.36	4.79	5.50	5.59	6.23	6.34	7.12	7.52	7.74	8.09	8.48	9.00	9.34	10.10	10.83	11.46	12.17

Weight (gr)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
9N1	*Adnp*$^{+/-}$	NAP		1.83	2.30	2.62	2.86	3.21	3.61	4.09	4.59	5.25	5.74	6.15	6.43	6.93	7.03	7.26	7.57	8.36	9.13	10.42	11.34	12.52
10N2	*Adnp*$^{+/-}$	NAP	1.75	2.01	2.24	2.68	3.05	3.37	3.80	4.40	5.12	5.33	5.57	5.67	6.26	6.18	6.53	6.65	7.11	7.36	7.72	8.43	9.48	10.35
10N3	*Adnp*$^{+/-}$	NAP	1.80	1.93	2.29	2.67	3.03	3.37	3.97	4.50	4.71	4.87	4.95	5.75	5.79	6.23	6.66	6.66	6.90	7.28	7.57	7.64	8.99	9.96
10N5	*Adnp*$^{+/-}$	NAP	1.75	1.89	2.12	2.53	2.77	2.56	3.59	3.80	4.39	4.98	4.98	5.24	5.43	5.94	5.82	6.10	6.39	6.61	6.90	7.13	7.12	7.45
11N3	*Adnp*$^{+/-}$	NAP		2.03	2.34	2.67	3.17	3.60	4.06	4.62	5.10	5.26	5.76	6.30	6.57	7.09	7.56	7.83	8.29	8.58	9.04	10.00		
11N4	*Adnp*$^{+/-}$	NAP		1.87	2.33	2.65	3.20	3.50	3.91	4.33	4.65	4.98	5.51	6.06	6.53	7.05	7.42	7.88	8.19	8.54	8.94	9.04		
12N2	*Adnp*$^{+/-}$	NAP		1.95	2.28	2.75	3.19	3.83	4.42	5.10	5.60	6.02	6.21	6.45	6.71	6.96	7.41	7.53	8.28	8.69	9.24	9.76	10.53	

Table S26. Raw data for length measurement results.

Length (cm)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
2973	*Adnp*$^{+/+}$	Saline/DD	3.1	3.4	3.8	3.8	4.0	4.2	4.3	4.9	5.0	5.2	5.4	5.7	5.8	6.2	6.2	6.9	6.9	7.0	7.0	7.0	7.5	7.5
2984	*Adnp*$^{+/+}$	Saline/DD	3.1	3.3	3.7	3.8	4.0	4.0	4.5	4.6	4.7	4.8	5.4	5.4	5.5	6.0	6.2	6.2	6.5	6.5	6.5	7.0	7.0	7.0
2983	*Adnp*$^{+/+}$	Saline/DD	3.2	3.3	3.6	3.7	4.0	4.2	4.3	4.7	4.7	4.9	5.2	5.2	5.3	5.8	5.8	5.9	6.2	6.5	6.5	6.7	6.7	6.8
2996	*Adnp*$^{+/+}$	Saline/DD	3.3	3.6	3.8	4.1	4.1	4.5	4.4	5.0	5.2	5.5	5.8	5.9	6.1	6.5	6.5	6.8	6.8	7.0	7.0	7.5	7.8	7.9
2994	*Adnp*$^{+/+}$	Saline/DD	3.1	3.5	3.7	4.1	4.1	4.5	4.6	4.8	5.0	5.4	5.4	5.8	6.1	6.1	6.5	6.5	6.5	7.0	7.0	7.3	7.3	7.8
2993	*Adnp*$^{+/+}$	Saline/DD	3.2	3.5	3.7	4.0	4.0	4.3	4.4	4.8	5.2	5.2	5.4	5.6	6.1	6.1	6.1	6.5	6.5	6.8	7.0	7.4	7.6	8.0
2992	*Adnp*$^{+/+}$	Saline/DD	3.3	3.5	3.7	4.2	4.2	4.2	4.5	4.8	5.1	5.3	5.4	5.8	6.4	6.4	6.4	6.5	6.7	7.0	7.0	7.3	7.5	7.5
3003	*Adnp*$^{+/+}$	Saline/DD	2.9	3.2	3.6	3.7	4.0	4.2	4.6	5.0	5.0	5.3	5.4	5.8	5.8	6.0	6.5	6.5	6.9	6.9	7.0	7.5	7.5	8.0
3019	*Adnp*$^{+/+}$	Saline/DD	3.1	3.6	3.8	4.1	4.2	4.2	4.4	4.7	4.7	4.9	5.2	5.5	5.5	5.8	6.2	6.3	6.5	6.7	7.0	7.2	7.4	7.6
3020	*Adnp*$^{+/+}$	Saline/DD	3.0	3.6	3.8	3.9	3.9	4.3	4.3	4.6	4.6	5.0	5.3	5.6	5.6	6.0	6.2	6.4	6.5	6.7	7.0	7.1	7.3	7.6
3021	*Adnp*$^{+/+}$	Saline/DD	3.3	3.3	3.6	3.8	3.9	4.2	4.4	4.7	5.0	5.2	5.3	5.5	5.5	6.0	6.2	6.5	6.7	6.9	7.2	7.2	7.5	7.7
7S1	*Adnp*$^{+/+}$	Saline/DD	3.4	3.6	3.9	4.1	4.1	4.5	4.6	4.8	5.2	5.5	5.7	5.8	6.0	6.2	6.5	6.9	7.1	7.3	7.5	7.5	7.5	7.8
7S2	*Adnp*$^{+/+}$	Saline/DD	3.3	3.6	3.9	4.1	4.1	4.4	4.6	4.8	5.1	5.4	5.7	5.7	6.0	6.3	6.6	6.8	7.0	7.2	7.4	7.4	7.6	7.7
8S1	*Adnp*$^{+/+}$	Saline/DD	3.3	3.5	3.5	3.8	4.0	4.3	4.5	4.7	5.0	5.0	5.3	5.6	5.8	6.1	6.4	6.6	6.9	6.9	7.2	7.2	7.5	7.8
9S5	*Adnp*$^{+/+}$	Saline/DD		3.5	3.5	3.8	4.0	4.2	4.2	4.5	4.8	5.1	5.3	5.5	5.8	5.8	6.1	6.5	6.7	6.7	7.0	7.0	7.0	7.2
11S3	*Adnp*$^{+/+}$	Saline/DD		3.3	3.5	3.7	4.0	4.2	4.3	4.6	5.0	5.2	5.5	5.7	5.8	6.0	6.3	6.5	6.7	7.0	7.0	7.2		
12S1	*Adnp*$^{+/+}$	Saline/DD		3.1	3.5	3.9	4.1	4.3	4.4	4.7	5.1	5.4	5.6	5.9	6.2	6.5	6.5	6.7	6.8	7.0	7.5	7.6	7.8	
12S2	*Adnp*$^{+/+}$	Saline/DD		3.4	3.6	3.9	4.2	4.3	4.6	5.0	5.3	5.6	5.8	6.0	6.3	6.3	6.8	7.0	7.0	7.0	7.3	7.5	7.8	
2963	*Adnp*$^{+/+}$	Saline/DD	3.2	3.5	3.7	3.7	4.1	4.2	4.2	4.4	5.0	5.0	5.3	5.3	5.6	6.0	6.2	6.4	6.5	6.5	6.8	6.8	7.4	7.4
2968	*Adnp*$^{+/+}$	Saline/DD	3.2	3.4	3.6	3.7	4.2	4.2	4.5	4.5	5.0	5.4	5.5	5.6	5.9	6.2	6.3	6.5	6.5	6.9	7.0	7.0	7.4	7.6
2981	*Adnp*$^{+/+}$	Saline/DD	3.1	3.2	3.6	3.6	4.0	4.1	4.4	4.4	4.7	5.0	5.0	5.3	5.3	5.3	5.7	5.8	6.0	6.0	6.2	6.3	6.7	6.8
2977	*Adnp*$^{+/+}$	Saline/DD	3.1	3.3	3.6	3.9	4.1	4.3	4.3	4.5	4.7	5.0	5.0	5.3	5.5	5.5	6.2	6.2	6.2	6.5	6.5	6.8	7.0	7.0
2990	*Adnp*$^{+/+}$	Saline/DD	3.4	3.6	3.7	4.0	4.2	4.4	4.4	5.0	5.2	5.4	5.5	5.9	6.4	6.4	6.6	6.6	6.8	6.8	7.3	7.5	7.6	7.6
3001	*Adnp*$^{+/+}$	Saline/DD	3.2	3.2	3.7	3.7	3.8	4.2	4.3	4.8	4.8	5.1	5.3	6.0	6.0	6.2	6.3	6.6	6.6	7.0	7.0	7.5	7.6	7.7
3002	*Adnp*$^{+/+}$	Saline/DD	3.0	3.3	3.5	3.7	3.8	4.2	4.5	4.6	5.0	5.0	5.4	5.7	6.1	6.4	6.7	7.0	7.0	7.3	7.3	7.3	7.5	7.5
3055	*Adnp*$^{+/+}$	Saline/DD	2.9	3.2	3.6	4.1	4.1	4.1	4.1	4.5	4.5	4.8	5.1	5.3	5.4	5.6	6.0	6.2	6.5	6.6	6.7	6.8	7.0	7.3
3066	*Adnp*$^{+/+}$	Saline/DD	3.1	3.5	3.7	3.7	4.0	4.1	4.5	4.5	4.9	5.1	5.3	5.4	5.6	5.9	6.2	6.5	6.6	6.8	6.9	7.1	7.4	7.5
3070	*Adnp*$^{+/+}$	Saline/DD	3.2	3.3	3.5	3.5	3.9	4.0	4.2	4.3	4.6	4.9	5.2	5.2	5.5	5.8	6.0	6.2	6.5	6.6	6.9	7.1	7.3	7.3

Length (cm)																								
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
3071	*Adnp*$^{+/+}$	Saline/DD	3.1	3.5	3.5	3.5	3.9	4.1	4.3	4.5	4.8	5.1	5.2	5.3	5.5	5.9	6.2	6.3	6.6	6.6	6.8	6.9	7.0	7.0
8S2	*Adnp*$^{+/+}$	Saline/DD	3.2	3.5	3.7	4.0	4.3	4.4	4.6	4.9	5.1	5.2	5.5	5.7	6.0	6.2	6.5	6.5	6.6	6.6	7.0	7.0	7.4	7.6
8S3	*Adnp*$^{+/+}$	Saline/DD	3.1	3.4	3.5	3.8	4.0	4.2	4.4	4.6	4.9	5.0	5.2	5.5	5.9	6.2	6.3	6.5	6.5	6.5	6.8	7.2	7.5	7.5
9S1	*Adnp*$^{+/+}$	Saline/DD		3.5	3.6	3.9	4.2	4.4	4.4	4.4	4.8	5.2	5.5	5.7	6.0	6.0	6.2	6.5	6.7	6.9	7.0	7.3	7.4	7.5
10S1	*Adnp*$^{+/+}$	Saline/DD	3.3	3.5	3.7	3.9	4.0	4.2	4.5	4.6	4.7	4.9	5.0	5.2	5.5	5.7	6.0	6.2	6.5	6.5	6.7	7.0	7.1	7.3
10S2	*Adnp*$^{+/+}$	Saline/DD	3.0	3.3	3.6	3.8	3.8	4.1	4.2	4.5	4.7	5.0	5.2	5.3	5.5	5.7	5.9	6.2	6.2	6.5	6.6	7.0	7.0	7.1
10S6	*Adnp*$^{+/+}$	Saline/DD	3.0	3.3	3.6	3.9	4.0	4.2	4.5	4.7	4.8	5.0	5.2	5.3	5.5	5.8	6.0	6.4	6.5	6.5	6.8	7.0	7.0	7.4
11S1	*Adnp*$^{+/+}$	Saline/DD		3.2	3.5	3.7	4.0	4.0	4.1	4.4	4.7	4.9	5.0	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.6	7.0		
11S4	*Adnp*$^{+/+}$	Saline/DD		3.4	3.5	3.8	4.1	4.3	4.3	4.7	5.0	5.2	5.5	5.5	5.5	5.9	6.1	6.4	6.6	6.6	6.7	7.0		
12S3	*Adnp*$^{+/+}$	Saline/DD		3.5	3.6	3.9	4.2	4.3	4.6	4.6	4.9	5.2	5.5	5.8	6.0	6.3	6.8	7.0	7.1	7.2	7.5	7.5	7.5	
2970	*Adnp*$^{+/-}$	Saline/DD	3.1	3.3	3.6	3.7	4.0	4.0	4.2	4.3	5.0	5.5	5.5	5.5	5.5	5.3	6.0	6.0	6.0	6.3	6.5	6.7	6.9	7.1
2969	*Adnp*$^{+/-}$	Saline/DD	2.9	3.2	3.4	3.7	4.0	4.0	4.1	4.5	4.6	4.9	5.1	5.1	5.5	5.8	5.9	6.2	6.2	6.3	6.8	6.8	6.8	7.0
2985	*Adnp*$^{+/-}$	Saline/DD	3.0	3.3	3.4	3.7	4.1	4.3	4.3	5.0	5.0	5.0	5.2	5.3	5.4	5.6	5.6	6.1	6.1	6.5	6.5	6.5	7.0	7.0
3004	*Adnp*$^{+/-}$	Saline/DD	2.9	3.1	3.4	3.5	3.8	4.1	4.5	4.6	5.0	5.2	5.3	5.7	5.7	5.8	6.1	6.1	6.6	6.6	6.7	7.2	7.2	7.5
3056	*Adnp*$^{+/-}$	Saline/DD	3.2	3.5	3.7	4.0	4.0	4.3	4.3	4.6	4.7	5.0	5.3	5.4	5.5	5.9	6.1	6.3	6.5	6.6	7.0	7.2	7.4	7.6
3069	*Adnp*$^{+/-}$	Saline/DD	3.2	3.3	3.5	3.6	3.9	4.0	4.2	4.2	4.6	4.9	5.0	5.2	5.5	5.8	6.0	6.1	6.2	6.5	6.8	7.0	7.2	7.2
8S4	*Adnp*$^{+/-}$	Saline/DD	3.0	3.3	3.6	3.9	4.1	4.2	4.4	4.6	4.9	5.0	5.3	5.6	5.9	6.1	6.4	6.5	6.5	6.9	7.0	7.2	7.3	7.4
9S2	*Adnp*$^{+/-}$	Saline/DD		3.4	3.4	3.7	3.9	4.0	4.1	4.1	4.5	4.8	5.2	5.5	5.7	5.7	6.0	6.3	6.4	6.5	6.5	6.6	6.9	7.1
9S3	*Adnp*$^{+/-}$	Saline/DD		3.4	3.6	3.9	4.1	4.3	4.5	4.5	4.8	5.0	5.3	5.5	5.6	5.6	6.0	6.2	6.6	6.7	7.0	7.2	7.3	7.4
9S4	*Adnp*$^{+/-}$	Saline/DD		3.4	3.6	3.9	4.0	4.1	4.2	4.4	4.8	5.0	5.3	5.6	5.8	5.8	6.1	6.2	6.3	6.5	6.5	6.6	6.9	7.0
10S4	*Adnp*$^{+/-}$	Saline/DD	3.1	3.4	3.6	3.9	4.0	4.3	4.5	4.5	4.6	4.8	5.1	5.1	5.4	5.7	5.8	6.0	6.0	6.2	6.5	6.5	6.6	6.9
11S2	*Adnp*$^{+/-}$	Saline/DD		3.4	3.6	3.9	4.0	4.2	4.2	4.5	4.7	5.0	5.3	5.5	5.6	5.9	6.1	6.4	6.6	6.7	6.8	7.0		
2974	*Adnp*$^{+/-}$	Saline/DD	3.0	3.2	3.5	3.7	3.9	4.2	4.3	4.5	4.7	5.0	5.2	5.2	5.4	5.5	5.5	6.0	6.0	6.0	6.2	6.5	6.6	6.8
3023	*Adnp*$^{+/-}$	Saline/DD	3.0	3.2	3.5	3.6	3.6	3.9	4.0	4.2	4.5	4.8	5.0	5.0	5.2	5.4	5.7	6.0	6.1	6.3	6.5	6.6	6.6	6.8
3024	*Adnp*$^{+/-}$	Saline/DD	3.0	3.3	3.3	3.5	3.7	3.8	3.8	3.9	4.2	4.5	4.7	4.8	4.8	5.0	5.3	5.5	5.6	5.7	6.0	6.1	6.1	6.3
3074	*Adnp*$^{+/-}$	Saline/DD	3.0	3.3	3.5	3.8	4.0	4.0	4.3	4.3	4.5	4.7	5.0	5.0	5.5	5.8	6.0	6.1	6.3	6.5	6.5	6.6	6.7	6.8
3146	*Adnp*$^{+/-}$	Saline/DD	3.1	3.5	3.5	3.6	3.9	4.0	4.1	4.4	4.6	4.6	4.9	5.5	5.6	5.7	6.0	6.2	6.3	6.4	6.5	6.6	6.6	6.7
8S5	*Adnp*$^{+/-}$	Saline/DD	3.0	3.2	3.4	3.6	3.9	4.2	4.2	4.4	4.6	4.7	5.0	5.4	5.6	5.8	6.0	6.1	6.1	6.1	6.4	6.7	6.8	7.0
10S3	*Adnp*$^{+/-}$	Saline/DD	3.0	3.3	3.5	3.7	3.7	4.0	4.2	4.5	4.5	4.6	4.7	5.0	5.2	5.5	5.5	5.9	6.1	6.2	6.3	6.5	6.6	6.7
10S5	*Adnp*$^{+/-}$	Saline/DD	2.8	3.1	3.1	3.4	3.4	3.6	3.6	3.7	3.8	4.0	4.2	4.4	4.6	4.7	4.9	5.2	5.5	5.5	5.6	5.8	6.0	6.1

Length (cm)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
12S4	*Adnp*$^{+/-}$	Saline/DD		3.4	3.5	3.9	4.1	4.1	4.4	4.7	5.0	5.4	5.5	5.9	6.2	6.5	6.5	6.6	7.0	7.0	7.4	7.5	7.6	
2971	*Adnp*$^{+/+}$	NAP	3.0	3.4	3.6	3.7	4.1	4.4	4.5	4.7	4.9	5.0	5.5	5.5	6.0	6.0	6.3	6.3	6.5	6.8	7.0	7.0	7.3	7.5
2972	*Adnp*$^{+/+}$	NAP	3.1	3.4	3.7	3.8	4.2	4.3	4.3	4.5	5.0	5.3	5.5	5.5	5.7	6.0	6.2	6.2	6.5	6.5	6.8	7.0	7.0	7.6
2986	*Adnp*$^{+/+}$	NAP	3.1	3.3	3.5	3.8	4.0	4.2	4.3	4.6	4.9	5.2	5.2	5.2	5.2	5.5	5.8	6.2	6.2	6.4	6.5	6.5	7.0	7.0
3005	*Adnp*$^{+/+}$	NAP	3.0	3.2	3.5	3.9	4.0	4.3	4.5	4.8	4.9	5.1	5.5	6.0	6.0	6.2	6.4	6.5	6.8	6.9	7.0	7.3	7.5	7.5
3053	*Adnp*$^{+/+}$	NAP	3.5	3.5	3.8	4.2	4.2	4.5	4.5	4.8	4.8	5.1	5.3	5.5	5.6	6.1	6.4	6.6	6.7	6.9	7.2	7.5	7.6	7.7
3073	*Adnp*$^{+/+}$	NAP	3.2	3.4	3.8	3.8	4.1	4.3	4.5	4.5	4.8	5.0	5.3	5.5	5.8	6.1	6.4	6.6	6.8	7.0	7.1	7.3	7.5	7.7
3147	*Adnp*$^{+/+}$	NAP	3.2	3.6	3.7	3.9	4.1	4.2	4.5	4.5	4.8	5.0	5.3	5.3	5.6	6.0	6.4	6.6	6.9	7.1	7.2	7.5	7.6	7.7
7N1	*Adnp*$^{+/+}$	NAP	2.9	3.2	3.5	3.7	3.8	4.1	4.3	4.5	4.7	5.0	5.3	5.4	5.6	6.0	6.3	6.6	6.9	7.1	7.3	7.3	7.4	7.6
7N3	*Adnp*$^{+/+}$	NAP	3.5	3.7	4.0	4.2	4.2	4.5	4.7	4.8	5.1	5.2	5.5	5.7	6.0	6.4	6.6	6.8	7.0	7.2	7.4		7.7	7.9
8N3	*Adnp*$^{+/+}$	NAP	3.2	3.5	3.6	3.9	4.1	4.1	4.4	4.7	5.0	5.1	5.2	5.6	6.0	6.1	6.4	6.5	6.5	6.5	6.5	6.8	7.1	7.4
9N3	*Adnp*$^{+/+}$	NAP		3.5	3.8	4.1	4.1	4.3	4.3	4.5	4.8	5.1	5.4	5.6	5.9	5.9	6.2	6.5	6.6	6.7	6.7	7.0	7.1	7.4
9N4	*Adnp*$^{+/+}$	NAP		3.5	3.6	4.0	4.0	4.2	4.3	4.4	4.7	5.0	5.3	5.6	5.8	5.8	6.1	6.4	6.6	7.0	7.1	7.2	7.5	7.6
10N1	*Adnp*$^{+/+}$	NAP	3.3	3.5	3.8	4.0	4.0	4.1	4.5	4.7	5.0	5.1	5.4	5.5	5.7	6.0	6.1	6.5	6.5	6.6	6.8	7.0	7.0	7.4
11N5	*Adnp*$^{+/+}$	NAP		3.3	3.6	3.9	4.0	4.2	4.3	4.5	4.8	5.1	5.2	5.5	5.7	6.0	6.1	6.4	6.7	6.8	6.8	7.0		
2966	*Adnp*$^{+/+}$	NAP	2.8	3.2	3.3	3.5	3.7	3.7	4.1	4.4	4.5	4.6	5.3	5.3	5.3	5.5	5.5	6.0	6.0	6.2	6.8	6.8	6.8	7.1
2975	*Adnp*$^{+/+}$	NAP	3.1	3.3	3.5	3.8	4.1	4.5	4.5	4.5	5.0	5.5	5.5	5.7	5.7	6.2	6.3	6.5	6.5	6.5	6.5	7.0	7.2	7.2
2980	*Adnp*$^{+/+}$	NAP	3.2	3.4	3.6	3.9	4.2	4.3	4.5	4.5	4.7	5.3	5.5	5.6	5.6	6.0	6.0	6.0	6.2	6.4	6.8	7.0	7.0	7.2
2991	*Adnp*$^{+/+}$	NAP	3.2	3.5	3.6	4.0	4.0	4.4	4.5	5.0	5.2	5.2	5.5	5.6	6.1	6.2	6.5	6.5	6.7	6.7	7.3	7.7	7.7	7.7
2988	*Adnp*$^{+/+}$	NAP	3.4	3.4	3.7	3.9	3.9	4.3	4.4	4.7	5.0	5.4	5.5	5.7	6.0	6.2	6.5	6.7	6.7	6.7	7.1	7.6	7.6	8.0
2999	*Adnp*$^{+/+}$	NAP	3.1	3.2	3.6	3.8	4.0	4.1	4.6	4.8	4.8	5.1	5.2	5.8	5.8	6.1	6.4	6.8	6.9	6.9	7.3	7.5	7.7	8.2
3018	*Adnp*$^{+/+}$	NAP	3.3	3.4	3.6	3.7	3.8	4.2	4.2	4.5	4.8	5.2	5.3	5.6	5.7	6.0	6.4	6.6	6.8	6.9	7.2	7.3	7.5	7.5
3025	*Adnp*$^{+/+}$	NAP	3.0	3.1	3.5	4.0	4.0	4.3	4.3	4.6	4.7	5.0	5.3	5.6	5.7	6.0	6.3	6.4	6.5	6.6	7.0	7.1	7.2	7.4
3054	*Adnp*$^{+/+}$	NAP	3.1	3.4	3.7	3.7	3.9	4.2	4.2	4.6	4.6	4.9	5.2	5.4	5.6	5.8	6.1	6.3	6.5	6.6	7.0	7.1	7.3	7.5
3068	*Adnp*$^{+/+}$	NAP	3.1	3.2	3.5	3.9	4.1	4.1	4.3	4.5	4.8	5.0	5.3	5.3	5.5	5.7	6.0	6.2	6.5	6.6	6.6	6.8	7.0	7.2
8N1	*Adnp*$^{+/+}$	NAP	3.1	3.4	3.5	3.8	3.9	4.1	4.3	4.5	4.8	4.8	5.1	5.4	5.7	6.0	6.3	6.4	6.6	6.6	6.9	7.2	7.3	7.5
9N5	*Adnp*$^{+/+}$	NAP		3.5	3.8	4.0	4.2	4.3	4.3	4.5	4.7	5.0	5.4	5.6	5.8	5.8	6.2	6.5	6.7	6.7	7.0	7.0	7.2	7.5
10N6	*Adnp*$^{+/+}$	NAP	3.1	3.4	3.5	3.8	3.8	4.0	4.3	4.5	4.8	5.0	5.3	5.4	5.5	5.8	6.0	6.3	6.5	6.6	6.7	6.8	7.0	7.3
11N1	*Adnp*$^{+/+}$	NAP		3.5	3.5	3.7	4.0	4.3	4.3	4.5	4.9	5.1	5.3	5.5	5.7	6.0	6.3	6.5	6.5	6.7	6.7	7.0		
11N2	*Adnp*$^{+/+}$	NAP		3.3	3.6	3.8	4.0	4.1	4.1	4.4	4.7	5.0	5.3	5.5	5.6	6.0	6.1	6.4	6.7	6.7	6.7	6.9		

Length (cm)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
12N1	*Adnp*$^{+/+}$	NAP		3.5	3.5	3.9	4.1	4.3	4.5	4.7	5.1	5.5	5.6	5.8	6.0	6.4	6.5	6.8	6.9	7.0	7.4	7.5	7.5	
12N3	*Adnp*$^{+/+}$	NAP		3.4	3.5	3.9	4.1	4.3	4.5	4.7	5.1	5.3	5.6	6.0	6.2	6.2	6.4	6.7	6.8	7.0	7.2	7.5	7.6	
2982	*Adnp*$^{+/-}$	NAP	3.0	3.0	3.5	3.6	3.8	4.2	4.3	4.5	5.0	5.0	5.3	5.7	5.7	6.1	6.1	6.1	6.3	6.3	6.3	6.5	6.8	7.0
2995	*Adnp*$^{+/-}$	NAP	3.1	3.5	3.9	4.1	4.1	4.3	4.3	4.9	4.9	5.1	5.4	5.7	6.2	6.2	6.2	6.3	6.4	6.5	6.8	7.0	7.0	7.4
3017	*Adnp*$^{+/-}$	NAP	3.0	3.5	3.8	3.8	3.9	4.2	4.3	4.5	4.7	5.1	5.3	5.5	5.5	5.9	6.2	6.4	6.5	6.7	7.0	7.1	7.4	7.6
3065	*Adnp*$^{+/-}$	NAP	2.9	3.1	3.3	3.9	3.9	3.9	3.9	4.1	4.1	4.1	4.3	4.4	4.4	4.6	4.7	4.9	5.1	5.2	5.5	5.6	5.6	5.7
3067	*Adnp*$^{+/-}$	NAP	3.0	3.2	3.5	3.5	3.7	3.8	4.2	4.2	4.5	4.8	5.0	5.0	5.3	5.5	5.7	6.0	6.2	6.2	6.4	6.5	6.7	6.8
7N2	*Adnp*$^{+/-}$	NAP	3.4	3.5	3.7	4.0	4.1	4.3	4.5	4.6	4.9	5.2	5.5	5.5	5.8	6.1	6.4	6.7	6.9	7.1	7.2	7.2	7.4	7.5
8N4	*Adnp*$^{+/-}$	NAP	3.1	3.4	3.5	3.8	3.9	4.1	4.3	4.6	4.8	5.0	5.2	5.5	5.8	5.8	6.0	6.3	6.4	6.4	7.0	7.2	7.5	7.5
8N5	*Adnp*$^{+/-}$	NAP	3.0	3.2	3.4	3.7	4.0	4.3	4.5	4.7	5.0	5.0	5.2	5.6	5.8	6.0	6.2	6.5	6.7	6.7	7.0	7.3	7.4	7.5
9N2	*Adnp*$^{+/-}$	NAP		3.4	3.6	3.9	4.1	4.2	4.4	4.5	4.7	5.0	5.3	5.5	5.7	5.8	6.1	6.3	6.4	6.5	6.6	6.7	7.0	7.2
10N4	*Adnp*$^{+/-}$	NAP	3.0	3.2	3.3	3.4	3.7	3.9	4.2	4.5	4.5	4.7	5.0	5.1	5.4	5.7	5.8	6.1	6.1	6.2	6.5	6.5	6.6	6.9
12N4	*Adnp*$^{+/-}$	NAP		3.4	3.6	3.9	4.1	4.3	4.7	5.0	5.1	5.4	5.6	5.9	6.1	6.2	6.5	6.7	7.0	7.0	7.0	7.2	7.5	
12N5	*Adnp*$^{+/-}$	NAP		3.2	3.5	3.9	4.1	4.2	4.4	4.7	5.1	5.5	5.6	5.8	6.0	6.4	6.4	6.5	6.6	6.6	6.8	6.8	7.0	
2964	*Adnp*$^{+/-}$	NAP	2.9	3.2	3.5	3.7	3.8	4.0	4.2	4.4	4.7	5.0	5.0	5.4	5.4	6.0	6.1	6.3	6.3	6.3	6.5	6.7	7.0	7.0
2965	*Adnp*$^{+/-}$	NAP	3.0	3.2	3.3	3.5	3.9	4.2	4.2	4.5	4.6	4.9	5.1	5.1	5.5	5.5	5.8	6.1	6.1	6.5	6.6	6.7	6.9	7.1
2967	*Adnp*$^{+/-}$	NAP	3.0	3.2	3.5	3.8	4.0	4.0	4.2	4.2	4.8	5.0	5.3	5.3	5.4	5.5	5.8	5.8	6.0	6.4	6.8	7.0	7.0	7.0
2976	*Adnp*$^{+/-}$	NAP	2.9	3.3	3.3	3.8	3.8	4.1	4.1	4.7	4.7	5.0	5.0	5.0	5.2	5.2	5.2	5.2	6.0	6.0	6.0	6.0	6.2	6.7
2978	*Adnp*$^{+/-}$	NAP	3.1	3.2	3.6	3.8	4.0	4.0	4.5	4.5	4.6	5.0	5.5	5.6	5.6	5.6	5.6	5.8	6.1	6.1	6.5	6.5	7.0	7.0
2979	*Adnp*$^{+/-}$	NAP	3.2	3.2	3.2	3.7	3.8	4.0	4.5	4.5	4.6	4.8	5.1	5.2	5.5	5.5	5.5	5.6	5.6	6.0	6.0	6.0	6.5	6.5
2989	*Adnp*$^{+/-}$	NAP	3.1	3.2	3.4	3.8	4.0	4.1	4.1	4.5	5.0	5.0	5.3	5.5	5.7	5.9	6.1	6.4	6.4	6.5	7.0	7.3	7.3	7.3
2987	*Adnp*$^{+/-}$	NAP	3.1	3.4	3.6	4.0	4.0	4.2	4.5	4.6	4.9	5.3	5.3	5.9	5.9	6.0	6.2	6.5	6.6	6.6	6.8	7.0	7.4	8.0
2998	*Adnp*$^{+/-}$	NAP	2.9	3.2	3.3	3.5	3.8	4.1	4.4	4.6	4.8	5.2	5.2	5.6	5.6	6.0	6.2	6.2	6.5	6.8	6.9	7.0	7.5	7.5
3000	*Adnp*$^{+/-}$	NAP	2.7	3.2	3.3	3.5	3.8	4.1	4.5	4.5	4.7	5.1	5.3	5.7	5.8	5.8	6.1	6.4	6.5	6.6	7.0	7.2	7.5	7.5
2997	*Adnp*$^{+/-}$	NAP	3.1	3.3	3.5	3.8	3.8	4.2	4.3	4.8	4.8	5.3	5.3	5.6	5.6	6.0	6.1	5.8	6.3	6.8	7.0	7.0	7.1	7.5
3057	*Adnp*$^{+/-}$	NAP	2.8	3.2	3.5	3.7	3.7	3.9	3.9	4.1	4.2	4.5	4.7	5.0	5.1	5.4	5.6	5.9	6.0	6.2	6.4	6.5	6.6	6.8
3072	*Adnp*$^{+/-}$	NAP	3.1	3.3	3.4	3.6	3.9	4.0	4.3	4.4	4.6	4.9	5.0	5.2	5.5	5.8	6.1	6.2	6.3	6.5	6.7	6.8	7.0	7.1
3075	*Adnp*$^{+/-}$	NAP	3.0	3.3	3.4	3.7	3.7	4.0	4.2	4.2	4.5	4.6	4.9	5.0	5.3	5.6	5.8	6.0	6.1	6.2	6.4	6.4	6.6	6.8
3148	*Adnp*$^{+/-}$	NAP	2.9	3.2	3.4	3.5	3.8	3.8	4.0	4.3	4.5	4.5	4.7	4.8	5.0	5.2	5.4	5.7	5.8	6.0	6.0	6.1	6.4	6.6
8N2	*Adnp*$^{+/-}$	NAP	3.1	3.4	3.5	3.8	4.1	4.1	4.3	4.6	4.9	5.0	5.3	5.6	5.8	6.0	6.3	6.4	6.5	6.6	6.9	7.1	7.2	7.4

Length (cm)																							
Number	**Genotype**	**Treatment**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
9N1	*Adnp*$^{+/-}$	NAP		3.0	3.5	3.8	4.0	4.1	4.1	4.2	4.6	4.8	5.2	5.3	5.6	5.7	6.0	6.2	6.5	6.6	6.6	6.7	7.0	7.1
10N2	*Adnp*$^{+/-}$	NAP	3.2	3.5	3.5	3.7	3.7	4.0	4.2	4.3	4.6	5.0	5.3	5.3	5.6	6.0	6.0	6.2	6.3	6.3	6.5	6.6	6.6	6.7
10N3	*Adnp*$^{+/-}$	NAP	3.0	3.3	3.6	3.7	3.7	4.0	4.2	4.5	4.6	4.7	5.0	5.2	5.3	5.6	5.7	6.0	6.1	6.2	6.5	6.6	6.6	6.7
10N5	*Adnp*$^{+/-}$	NAP	3.1	3.4	3.5	3.7	3.7	4.0	4.2	4.3	4.5	4.7	5.0	5.1	5.1	5.5	5.5	5.8	6.2	6.2	6.4	6.4	6.5	6.5
11N3	*Adnp*$^{+/-}$	NAP		3.2	3.4	3.7	4.1	4.3	4.3	4.6	5.0	5.2	5.3	5.5	5.7	6.0	6.0	6.2	6.5	6.6	6.6	6.9		
11N4	*Adnp*$^{+/-}$	NAP		3.3	3.6	3.7	4.0	4.1	4.1	4.5	4.9	5.0	5.2	5.5	5.7	6.0	6.0	6.2	6.6	6.7	6.7	6.8		
12N2	*Adnp*$^{+/-}$	NAP		3.2	3.4	3.8	4.0	4.1	4.2	4.5	4.7	5.0	5.3	5.5	5.6	5.6	5.6	6.0	6.3	6.3	6.6	6.7	6.8	

Table S27. Raw data for gait analysis.

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
12S1 M	*Adnp*$^{+/+}$	Saline/DD	0.22	0.10	6.29	0.33	0.12	0.21	0.07	5.88	0.29	0.07	0.17	0.11	5.48	0.28	0.08	0.24	0.07	6.28	0.32	0.08
12S2 M	*Adnp*$^{+/+}$	Saline/DD	0.12	0.10	6.92	0.22	0.10	0.11	0.09	6.02	0.19	0.07	0.13	0.10	6.90	0.22	0.10	0.14	0.08	6.92	0.22	0.09
7S1 M	*Adnp*$^{+/+}$	Saline/DD	0.13	0.09	5.14	0.22	0.09	0.12	0.06	4.42	0.19	0.06	0.12	0.09	4.88	0.21	0.08	0.13	0.07	4.60	0.21	0.07
7S2 M	*Adnp*$^{+/+}$	Saline/DD	0.19	0.12	4.57	0.30	0.12	0.24	0.09	4.26	0.31	0.08	0.18	0.12	4.50	0.29	0.11	0.23	0.08	4.00	0.28	0.08
8S1 M	*Adnp*$^{+/+}$	Saline/DD	0.19	0.09	4.50	0.29	0.10	0.14	0.07	3.25	0.21	0.07	0.18	0.10	4.51	0.29	0.09	0.17	0.09	3.93	0.26	0.08
9S5 M	*Adnp*$^{+/+}$	Saline/DD	0.10	0.08	6.52	0.18	0.07	0.10	0.07	6.17	0.17	0.06	0.11	0.08	6.87	0.19	0.08	0.11	0.06	5.89	0.16	0.06
11S3 M	*Adnp*$^{+/+}$	Saline/DD	0.02	0.10	6.97	0.13	0.01	0.03	0.07	7.94	0.10	0.01	0.04	0.07	6.17	0.11	0.02	0.04	0.11	8.12	0.15	0.01
3295M	*Adnp*$^{+/+}$	Saline/DD	0.24	0.11	5.49	0.35	0.13	0.23	0.11	5.00	0.35	0.08	0.18	0.11	4.76	0.29	0.10	0.29	0.09	5.66	0.38	0.12
3296M	*Adnp*$^{+/+}$	Saline/DD	0.20	0.13	5.73	0.33	0.12	0.23	0.09	5.71	0.32	0.10	0.20	0.12	5.81	0.33	0.13	0.23	0.10	5.73	0.33	0.09
3299M	*Adnp*$^{+/+}$	Saline/DD	0.19	0.13	5.22	0.32	0.12	0.22	0.09	5.29	0.31	0.08	0.19	0.12	5.27	0.32	0.13	0.21	0.08	4.78	0.28	0.08
3307M	*Adnp*$^{+/+}$	Saline/DD	0.23	0.11	4.41	0.36	0.13	0.16	0.12	3.66	0.29	0.06	0.21	0.17	4.94	0.39	0.11	0.27	0.10	5.16	0.39	0.16
3308M	*Adnp*$^{+/+}$	Saline/DD	0.19	0.12	5.29	0.28	0.10	0.21	0.08	5.20	0.28	0.10	0.19	0.10	5.15	0.29	0.11	0.18	0.11	4.93	0.27	0.08
3317M	*Adnp*$^{+/+}$	Saline/DD	0.22	0.12	5.39	0.34	0.12	0.18	0.09	4.04	0.27	0.10	0.21	0.12	5.07	0.32	0.12	0.16	0.10	3.82	0.25	0.08
3324M	*Adnp*$^{+/+}$	Saline/DD	0.12	0.09	5.82	0.21	0.09	0.14	0.09	6.12	0.22	0.08	0.12	0.10	6.24	0.22	0.10	0.15	0.08	6.26	0.22	0.09
3334M	*Adnp*$^{+/+}$	Saline/DD	0.18	0.09	4.48	0.28	0.09	0.23	0.07	4.81	0.30	0.09	0.19	0.10	4.83	0.30	0.10	0.21	0.09	4.71	0.30	0.07
3019M	*Adnp*$^{+/+}$	Saline/DD	0.16	0.11	6.43	0.27	0.12	0.13	0.10	5.74	0.24	0.09	0.16	0.12	6.42	0.27	0.11	0.14	0.09	5.69	0.22	0.10
3020M	*Adnp*$^{+/+}$	Saline/DD	0.15	0.12	6.43	0.28	0.12	0.17	0.09	5.68	0.25	0.08	0.16	0.12	6.47	0.28	0.12	0.19	0.09	6.43	0.28	0.10
3021M	*Adnp*$^{+/+}$	Saline/DD	0.16	0.09	5.21	0.25	0.09	0.17	0.09	5.22	0.26	0.10	0.17	0.09	5.23	0.26	0.09	0.16	0.11	5.46	0.26	0.09
2973M	*Adnp*$^{+/+}$	Saline/DD	0.19	0.10	5.88	0.28	0.11	0.22	0.08	6.08	0.28	0.08	0.19	0.11	5.88	0.30	0.10	0.22	0.08	6.06	0.29	0.08
2983M	*Adnp*$^{+/+}$	Saline/DD	0.21	0.10	5.30	0.33	0.10	0.19	0.08	4.44	0.28	0.06	0.16	0.09	4.35	0.25	0.07	0.23	0.08	5.13	0.31	0.08
2984M	*Adnp*$^{+/+}$	Saline/DD	0.11	0.08	6.80	0.19	0.08	0.12	0.08	7.14	0.19	0.07	0.11	0.09	7.61	0.20	0.09	0.13	0.07	7.16	0.19	0.07
2992M	*Adnp*$^{+/+}$	Saline/DD	0.26	0.14	5.34	0.40	0.14	0.30	0.10	5.34	0.40	0.09	0.27	0.15	5.47	0.42	0.14	0.32	0.09	5.46	0.42	0.10
2993M	*Adnp*$^{+/+}$	Saline/DD	0.15	0.09	5.77	0.24	0.12	0.18	0.10	6.10	0.27	0.07	0.12	0.12	5.73	0.25	0.09	0.17	0.07	5.64	0.25	0.09
2994M	*Adnp*$^{+/+}$	Saline/DD	0.17	0.12	6.66	0.28	0.11	0.15	0.08	5.34	0.23	0.07	0.16	0.11	6.06	0.27	0.11	0.18	0.08	6.09	0.27	0.08
2996M	*Adnp*$^{+/+}$	Saline/DD	0.17	0.10	5.45	0.27	0.10	0.18	0.08	5.35	0.23	0.07	0.18	0.12	6.27	0.28	0.12	0.21	0.09	6.49	0.30	0.09
3003M	*Adnp*$^{+/+}$	Saline/DD	0.23	0.10	5.15	0.34	0.10	0.25	0.08	4.61	0.30	0.07	0.22	0.12	5.42	0.35	0.10	0.27	0.07	4.97	0.34	0.08

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
12S3 F	*Adnp*$^{+/+}$	Saline/DD	0.11	0.09	6.67	0.20	0.08	0.10	0.07	5.18	0.16	0.05	0.11	0.09	6.44	0.19	0.08	0.14	0.07	6.58	0.21	0.09
8S2 F	*Adnp*$^{+/+}$	Saline/DD	0.13	0.13	4.46	0.27	0.12	0.09	0.13	3.59	0.23	0.06	0.10	0.10	3.46	0.21	0.08	0.11	0.11	3.73	0.22	0.08
8S3 F	*Adnp*$^{+/+}$	Saline/DD	0.12	0.11	4.99	0.23	0.10	0.13	0.12	5.07	0.24	0.11	0.10	0.10	4.20	0.21	0.09	0.11	0.12	4.71	0.23	0.09
9S1 F	*Adnp*$^{+/+}$	Saline/DD	0.13	0.10	6.18	0.23	0.09	0.16	0.10	6.54	0.25	0.09	0.15	0.09	6.08	0.24	0.09	0.12	0.08	4.96	0.19	0.07
10S1 F	*Adnp*$^{+/+}$	Saline/DD	0.05	0.07	8.21	0.12	0.03	0.05	0.06	7.64	0.11	0.04	0.05	0.07	8.74	0.12	0.04	0.06	0.06	7.48	0.12	0.04
10S2 F	*Adnp*$^{+/+}$	Saline/DD	0.09	0.09	6.52	0.18	0.09	0.08	0.09	6.20	0.17	0.07	0.09	0.09	6.57	0.19	0.09	0.09	0.08	6.06	0.17	0.08
10S6 F	*Adnp*$^{+/+}$	Saline/DD	0.14	0.09	4.41	0.23	0.10	0.12	0.11	4.41	0.23	0.11	0.17	0.10	5.39	0.28	0.11	0.10	0.16	5.14	0.26	0.06
11S1 F	*Adnp*$^{+/+}$	Saline/DD	0.06	0.09	6.53	0.15	0.06	0.06	0.08	6.11	0.13	0.05	0.06	0.08	5.77	0.13	0.06	0.07	0.07	5.83	0.13	0.07
11S4 F	*Adnp*$^{+/+}$	Saline/DD	0.08	0.10	7.13	0.18	0.07	0.10	0.06	6.46	0.17	0.07	0.08	0.09	6.60	0.17	0.07	0.09	0.08	6.18	0.16	0.05
3309F	*Adnp*$^{+/+}$	Saline/DD	0.17	0.10	5.43	0.25	0.10	0.11	0.11	4.29	0.22	0.07	0.16	0.11	5.37	0.25	0.09	0.18	0.08	5.07	0.24	0.13
3323F	*Adnp*$^{+/+}$	Saline/DD	0.16	0.10	5.54	0.25	0.10	0.15	0.09	5.02	0.24	0.08	0.15	0.10	5.56	0.25	0.10	0.17	0.08	5.19	0.24	0.09
3327F	*Adnp*$^{+/+}$	Saline/DD	0.14	0.09	5.04	0.23	0.08	0.15	0.07	4.65	0.21	0.06	0.15	0.08	4.90	0.23	0.09	0.15	0.07	4.68	0.22	0.07
3329F	*Adnp*$^{+/+}$	Saline/DD	0.23	0.10	5.38	0.33	0.11	0.15	0.11	4.23	0.27	0.08	0.22	0.11	5.35	0.34	0.10	0.19	0.09	4.43	0.27	0.11
3055F	*Adnp*$^{+/+}$	Saline/DD	0.21	0.13	5.99	0.36	0.13	0.17	0.11	4.88	0.28	0.09	0.20	0.12	5.73	0.33	0.13	0.19	0.11	5.46	0.30	0.11
3066F	*Adnp*$^{+/+}$	Saline/DD	0.11	0.10	7.03	0.20	0.09	0.11	0.07	6.12	0.18	0.08	0.10	0.09	6.66	0.20	0.09	0.10	0.08	6.23	0.18	0.07
3070F	*Adnp*$^{+/+}$	Saline/DD	0.10	0.09	5.80	0.19	0.09	0.10	0.10	5.34	0.18	0.07	0.10	0.11	6.14	0.21	0.09	0.11	0.10	6.13	0.20	0.09
3071F	*Adnp*$^{+/+}$	Saline/DD	0.17	0.14	3.84	0.32	0.10	0.26	0.11	4.00	0.38	0.09	0.17	0.13	3.41	0.29	0.10	0.30	0.11	4.02	0.43	0.12
2963F	*Adnp*$^{+/+}$	Saline/DD	0.17	0.09	5.54	0.27	0.10	0.19	0.08	5.11	0.28	0.09	0.17	0.10	5.53	0.26	0.09	0.18	0.08	5.11	0.26	0.08
2968F	*Adnp*$^{+/+}$	Saline/DD	0.17	0.11	7.01	0.26	0.10	0.15	0.16	8.58	0.31	0.09	0.16	0.10	6.63	0.26	0.09	0.17	0.09	6.61	0.26	0.10
2977F	*Adnp*$^{+/+}$	Saline/DD	0.15	0.10	6.51	0.26	0.10	0.16	0.08	6.29	0.24	0.08	0.16	0.11	6.76	0.26	0.11	0.17	0.09	6.75	0.26	0.09
2981F	*Adnp*$^{+/+}$	Saline/DD	0.13	0.09	5.81	0.25	0.08	0.10	0.07	3.82	0.16	0.05	0.17	0.10	6.44	0.28	0.09	0.16	0.09	6.51	0.25	0.13
2990F	*Adnp*$^{+/+}$	Saline/DD	0.16	0.10	5.19	0.26	0.10	0.19	0.09	5.98	0.28	0.09	0.16	0.11	5.55	0.26	0.10	0.18	0.09	5.64	0.27	0.08
3001F	*Adnp*$^{+/+}$	Saline/DD	0.22	0.11	5.36	0.33	0.14	0.16	0.10	4.01	0.27	0.09	0.19	0.13	5.22	0.32	0.11	0.18	0.12	4.73	0.30	0.10
3002F	*Adnp*$^{+/+}$	Saline/DD	0.19	0.10	4.78	0.29	0.09	0.16	0.10	4.51	0.24	0.08	0.20	0.11	5.31	0.33	0.11	0.21	0.12	5.56	0.33	0.11
7N1 M	*Adnp*$^{+/+}$	NAP	0.16	0.11	5.11	0.27	0.11	0.18	0.11	5.39	0.29	0.11	0.16	0.11	4.90	0.27	0.10	0.14	0.10	4.48	0.23	0.09
7N3 M	*Adnp*$^{+/+}$	NAP	0.14	0.12	5.72	0.26	0.11	0.15	0.08	5.17	0.23	0.07	0.14	0.11	5.71	0.25	0.12	0.16	0.08	5.45	0.24	0.08
8N3 M	*Adnp*$^{+/+}$	NAP	0.10	0.10	4.32	0.19	0.07	0.12	0.08	5.17	0.20	0.08	0.12	0.10	5.29	0.24	0.09	0.11	0.11	4.71	0.21	0.08

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
9N3 M	*Adnp*$^{+/+}$	NAP	0.14	0.10	6.46	0.24	0.09	0.13	0.07	5.47	0.19	0.08	0.14	0.09	6.45	0.24	0.10	0.14	0.09	6.41	0.24	0.08
9N4 M	*Adnp*$^{+/+}$	NAP	0.11	0.10	6.75	0.21	0.08	0.13	0.08	6.65	0.22	0.09	0.13	0.13	7.96	0.24	0.09	0.11	0.08	6.04	0.20	0.07
10N1 M	*Adnp*$^{+/+}$	NAP	0.09	0.11	4.40	0.20	0.08	0.12	0.08	4.36	0.22	0.08	0.10	0.11	4.16	0.21	0.12	0.11	0.10	4.54	0.22	0.08
11N5 M	*Adnp*$^{+/+}$	NAP	0.13	0.09	5.97	0.22	0.08	0.07	0.11	4.73	0.18	0.05	0.12	0.09	5.85	0.21	0.07	0.09	0.09	4.99	0.18	0.07
3294M	*Adnp*$^{+/+}$	NAP	0.12	0.09	5.91	0.21	0.09	0.14	0.07	6.15	0.21	0.08	0.13	0.10	6.12	0.22	0.09	0.15	0.08	6.12	0.22	0.07
3297M	*Adnp*$^{+/+}$	NAP	0.12	0.09	5.03	0.21	0.09	0.12	0.07	4.55	0.19	0.06	0.12	0.09	5.00	0.21	0.09	0.14	0.07	4.97	0.21	0.08
3303M	*Adnp*$^{+/+}$	NAP	0.15	0.11	5.56	0.26	0.11	0.17	0.08	5.24	0.25	0.08	0.14	0.10	5.30	0.24	0.10	0.15	0.08	4.89	0.24	0.07
3312M	*Adnp*$^{+/+}$	NAP	0.15	0.09	4.65	0.25	0.08	0.18	0.07	4.85	0.26	0.08	0.18	0.10	5.23	0.27	0.10	0.17	0.08	4.78	0.25	0.07
3315M	*Adnp*$^{+/+}$	NAP	0.17	0.11	6.22	0.29	0.10	0.19	0.09	6.28	0.28	0.09	0.17	0.10	6.18	0.29	0.11	0.16	0.08	5.23	0.23	0.08
3333M	*Adnp*$^{+/+}$	NAP	0.24	0.10	4.67	0.35	0.11	0.21	0.08	3.91	0.30	0.08	0.24	0.11	4.59	0.36	0.10	0.25	0.08	4.88	0.34	0.08
3053M	*Adnp*$^{+/+}$	NAP	0.22	0.13	6.34	0.35	0.12	0.17	0.15	6.04	0.31	0.12	0.19	0.10	5.56	0.29	0.11	0.20	0.14	6.27	0.33	0.15
3073M	*Adnp*$^{+/+}$	NAP	0.13	0.10	5.52	0.23	0.09	0.15	0.07	5.51	0.22	0.07	0.13	0.10	5.78	0.24	0.10	0.16	0.07	5.87	0.24	0.08
3147M	*Adnp*$^{+/+}$	NAP	0.19	0.10	5.39	0.30	0.10	0.25	0.09	6.09	0.34	0.10	0.18	0.10	5.20	0.28	0.10	0.19	0.08	5.03	0.28	0.07
2971M	*Adnp*$^{+/+}$	NAP	0.19	0.11	5.81	0.30	0.11	0.20	0.08	5.14	0.27	0.08	0.19	0.10	5.57	0.29	0.10	0.20	0.07	4.99	0.28	0.08
2972M	*Adnp*$^{+/+}$	NAP	0.20	0.11	6.09	0.31	0.14	0.22	0.09	6.02	0.31	0.09	0.17	0.13	5.81	0.31	0.10	0.22	0.09	5.87	0.31	0.08
2986M	*Adnp*$^{+/+}$	NAP	0.17	0.10	4.53	0.26	0.09	0.19	0.08	5.10	0.27	0.09	0.15	0.09	4.24	0.24	0.08	0.18	0.10	5.70	0.29	0.06
3005M	*Adnp*$^{+/+}$	NAP	0.21	0.11	6.35	0.30	0.12	0.22	0.09	5.97	0.32	0.10	0.18	0.12	6.38	0.30	0.10	0.20	0.11	6.27	0.31	0.09
12N1 F	*Adnp*$^{+/+}$	NAP	0.15	0.10	5.35	0.25	0.10	0.20	0.07	5.56	0.28	0.07	0.14	0.11	5.45	0.25	0.09	0.20	0.07	5.69	0.28	0.07
12N3 F	*Adnp*$^{+/+}$	NAP	0.19	0.11	5.52	0.32	0.12	0.20	0.10	5.30	0.32	0.08	0.20	0.13	5.56	0.33	0.11	0.23	0.09	5.22	0.32	0.10
8N1 F	*Adnp*$^{+/+}$	NAP	0.10	0.11	5.21	0.20	0.09	0.11	0.09	5.28	0.20	0.07	0.10	0.11	5.53	0.21	0.10	0.13	0.08	5.23	0.20	0.09
9N5 F	*Adnp*$^{+/+}$	NAP	0.05	0.07	9.28	0.12	0.05	0.06	0.06	9.32	0.12	0.06	0.05	0.07	8.83	0.12	0.05	0.06	0.07	8.57	0.13	0.05
10N6 F	*Adnp*$^{+/+}$	NAP	0.08	0.07	6.78	0.15	0.07	0.07	0.06	6.01	0.13	0.06	0.07	0.07	6.61	0.14	0.07	0.09	0.06	7.00	0.15	0.07
11N1 F	*Adnp*$^{+/+}$	NAP	0.06	0.08	6.91	0.14	0.05	0.07	0.06	6.51	0.13	0.05	0.06	0.07	6.56	0.13	0.06	0.07	0.07	6.75	0.14	0.05
11N2 F	*Adnp*$^{+/+}$	NAP	0.15	0.13	6.23	0.29	0.12	0.10	0.10	4.04	0.20	0.07	0.14	0.12	5.37	0.27	0.11	0.19	0.10	5.37	0.31	0.12
3302F	*Adnp*$^{+/+}$	NAP	0.24	0.12	5.00	0.37	0.13	0.12	0.11	3.32	0.24	0.12	0.24	0.13	5.01	0.38	0.12	0.07	0.25	5.22	0.32	0.04
3304F	*Adnp*$^{+/+}$	NAP	0.08	0.08	6.63	0.16	0.07	0.08	0.06	6.22	0.15	0.06	0.08	0.08	6.68	0.16	0.07	0.09	0.06	6.27	0.15	0.06
3306F	*Adnp*$^{+/+}$	NAP	0.10	0.09	4.90	0.20	0.07	0.10	0.09	4.33	0.18	0.07	0.11	0.09	5.20	0.20	0.08	0.09	0.09	4.67	0.18	0.08

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
3313F	*Adnp*$^{+/+}$	NAP	0.19	0.10	4.35	0.28	0.11	0.23	0.09	4.90	0.33	0.11	0.21	0.13	5.16	0.34	0.12	0.18	0.09	4.29	0.26	0.08
3318F	*Adnp*$^{+/+}$	NAP	0.24	0.12	4.95	0.37	0.12	0.26	0.10	4.77	0.37	0.11	0.22	0.11	4.53	0.33	0.11	0.18	0.08	3.38	0.25	0.07
3319F	*Adnp*$^{+/+}$	NAP	0.11	0.11	6.03	0.22	0.09	0.11	0.09	5.43	0.20	0.08	0.13	0.10	6.04	0.22	0.11	0.13	0.08	5.99	0.22	0.09
3331F	*Adnp*$^{+/+}$	NAP	0.20	0.11	4.70	0.31	0.11	0.20	0.08	4.65	0.27	0.08	0.18	0.11	4.69	0.29	0.09	0.21	0.08	4.30	0.29	0.07
3332F	*Adnp*$^{+/+}$	NAP	0.18	0.11	5.00	0.30	0.11	0.21	0.08	4.74	0.29	0.08	0.18	0.10	4.84	0.29	0.11	0.19	0.08	4.37	0.27	0.08
3018F	*Adnp*$^{+/+}$	NAP	0.14	0.11	5.33	0.24	0.10	0.19	0.07	5.46	0.26	0.11	0.16	0.10	5.61	0.26	0.11	0.12	0.08	4.07	0.20	0.05
3025F	*Adnp*$^{+/+}$	NAP	0.25	0.11	5.33	0.34	0.11	0.18	0.14	4.69	0.33	0.08	0.23	0.11	5.43	0.34	0.11	0.25	0.09	5.07	0.35	0.15
3054F	*Adnp*$^{+/+}$	NAP	0.13	0.10	6.53	0.23	0.10	0.13	0.08	6.11	0.21	0.07	0.13	0.10	6.48	0.23	0.10	0.15	0.08	6.50	0.23	0.09
3068F	*Adnp*$^{+/+}$	NAP	0.22	0.14	5.23	0.35	0.14	0.18	0.18	4.97	0.36	0.11	0.17	0.11	4.09	0.28	0.11	0.21	0.10	4.24	0.31	0.15
2966F	*Adnp*$^{+/+}$	NAP	0.11	0.10	7.28	0.21	0.09	0.14	0.09	7.22	0.21	0.08	0.12	0.10	7.15	0.21	0.10	0.14	0.08	7.10	0.22	0.09
2975F	*Adnp*$^{+/+}$	NAP	0.21	0.13	5.78	0.35	0.14	0.24	0.10	5.36	0.34	0.09	0.19	0.13	5.39	0.33	0.12	0.27	0.10	6.00	0.38	0.11
2980F	*Adnp*$^{+/+}$	NAP	0.17	0.10	5.87	0.28	0.11	0.19	0.10	5.77	0.28	0.09	0.16	0.11	5.97	0.27	0.10	0.20	0.09	6.07	0.29	0.10
2988F	*Adnp*$^{+/+}$	NAP	0.20	0.11	5.36	0.30	0.12	0.23	0.08	4.84	0.30	0.09	0.20	0.12	5.27	0.32	0.11	0.20	0.09	4.29	0.28	0.07
2991F	*Adnp*$^{+/+}$	NAP	0.12	0.09	5.34	0.22	0.08	0.12	0.11	5.30	0.22	0.06	0.14	0.09	5.38	0.23	0.09	0.17	0.09	5.88	0.25	0.10
2999F	*Adnp*$^{+/+}$	NAP	0.21	0.11	4.85	0.33	0.10	0.22	0.10	4.73	0.31	0.10	0.21	0.10	4.57	0.32	0.12	0.23	0.11	4.85	0.34	0.10
8S4	*Adnp*$^{+/-}$	Saline/DD	0.10	0.10	4.76	0.20	0.09	0.09	0.10	4.43	0.18	0.06	0.09	0.11	5.05	0.21	0.10	0.12	0.07	4.78	0.20	0.09
9S2	*Adnp*$^{+/-}$	Saline/DD	0.18	0.08	5.73	0.28	0.09	0.14	0.08	4.88	0.23	0.07	0.18	0.09	5.45	0.27	0.07	0.15	0.09	4.84	0.24	0.08
9S3	*Adnp*$^{+/-}$	Saline/DD	0.06	0.08	7.28	0.15	0.07	0.08	0.06	6.75	0.13	0.05	0.07	0.08	7.09	0.15	0.06	0.08	0.06	6.45	0.14	0.05
9S4	*Adnp*$^{+/-}$	Saline/DD	0.07	0.09	7.09	0.16	0.06	0.09	0.06	6.59	0.15	0.06	0.08	0.06	6.23	0.13	0.07	0.08	0.05	5.63	0.13	0.05
10S4	*Adnp*$^{+/-}$	Saline/DD	0.10	0.08	4.93	0.19	0.09	0.13	0.07	5.34	0.20	0.07	0.10	0.08	4.62	0.18	0.08	0.13	0.07	5.28	0.20	0.07
11S2	*Adnp*$^{+/-}$	Saline/DD	0.17	0.10	4.50	0.27	0.11	0.18	0.08	4.48	0.27	0.10	0.16	0.11	4.47	0.27	0.10	0.16	0.09	4.31	0.26	0.08
3298M	*Adnp*$^{+/-}$	Saline/DD	0.06	0.06	6.84	0.13	0.06	0.07	0.06	7.07	0.13	0.06	0.06	0.08	7.32	0.14	0.06	0.07	0.06	6.87	0.13	0.06
3301M	*Adnp*$^{+/-}$	Saline/DD	0.09	0.08	4.51	0.17	0.08	0.11	0.06	4.44	0.16	0.06	0.09	0.08	4.83	0.17	0.07	0.13	0.07	5.09	0.19	0.07
3305M	*Adnp*$^{+/-}$	Saline/DD	0.10	0.08	5.67	0.18	0.08	0.10	0.07	5.57	0.18	0.06	0.09	0.10	6.12	0.20	0.06	0.10	0.08	5.93	0.19	0.06
3311M	*Adnp*$^{+/-}$	Saline/DD	0.18	0.12	4.57	0.30	0.11	0.13	0.10	3.47	0.24	0.09	0.18	0.11	4.63	0.30	0.11	0.12	0.09	3.18	0.21	0.08
3330M	*Adnp*$^{+/-}$	Saline/DD	0.10	0.08	5.13	0.18	0.08	0.11	0.06	4.69	0.16	0.06	0.10	0.08	5.15	0.18	0.08	0.12	0.06	5.14	0.18	0.07
3336M	*Adnp*$^{+/-}$	Saline/DD	0.16	0.10	4.76	0.27	0.09	0.17	0.07	4.31	0.24	0.06	0.16	0.09	4.59	0.25	0.10	0.18	0.07	4.49	0.25	0.08

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
3056M	*Adnp*$^{+/-}$	Saline/DD	0.25	0.09	4.86	0.36	0.10	0.24	0.07	4.98	0.29	0.08	0.22	0.10	4.30	0.31	0.09	0.16	0.06	3.61	0.22	0.05
3069M	*Adnp*$^{+/-}$	Saline/DD	0.18	0.09	4.54	0.28	0.10	0.20	0.09	4.64	0.29	0.09	0.18	0.10	4.52	0.28	0.09	0.17	0.08	3.95	0.25	0.08
2969M	*Adnp*$^{+/-}$	Saline/DD	0.16	0.10	5.18	0.26	0.09	0.17	0.07	4.51	0.24	0.06	0.17	0.09	5.19	0.26	0.10	0.20	0.07	4.99	0.27	0.08
2970M	*Adnp*$^{+/-}$	Saline/DD	0.14	0.10	5.52	0.24	0.10	0.17	0.07	5.57	0.24	0.08	0.14	0.10	5.54	0.24	0.10	0.14	0.07	4.84	0.21	0.06
2985M	*Adnp*$^{+/-}$	Saline/DD	0.06	0.08	4.33	0.15	0.04	0.09	0.07	5.09	0.16	0.05	0.07	0.09	4.64	0.17	0.05	0.09	0.08	4.84	0.16	0.05
3004M	*Adnp*$^{+/-}$	Saline/DD	0.11	0.14	4.30	0.25	0.07	0.11	0.10	3.87	0.20	0.05	0.09	0.13	3.92	0.21	0.05	0.11	0.10	3.76	0.20	0.05
12S4 F	*Adnp*$^{+/-}$	Saline/DD	0.20	0.10	4.51	0.28	0.09	0.28	0.07	4.53	0.33	0.07	0.21	0.09	4.78	0.30	0.10	0.21	0.06	3.57	0.27	0.05
8S5 F	*Adnp*$^{+/-}$	Saline/DD	0.15	0.09	4.04	0.24	0.09	0.15	0.11	4.31	0.26	0.09	0.15	0.10	4.23	0.25	0.09	0.16	0.09	4.21	0.25	0.10
10S3	*Adnp*$^{+/-}$	Saline/DD	0.09	0.08	6.20	0.17	0.07	0.09	0.06	5.66	0.15	0.06	0.08	0.07	5.83	0.16	0.07	0.09	0.06	5.62	0.15	0.06
10S5	*Adnp*$^{+/-}$	Saline/DD	0.07	0.08	5.18	0.15	0.06	0.08	0.09	5.59	0.17	0.07	0.06	0.08	5.61	0.15	0.06	0.06	0.07	4.95	0.13	0.06
3314F	*Adnp*$^{+/-}$	Saline/DD	0.15	0.09	4.73	0.25	0.10	0.11	0.07	3.33	0.18	0.07	0.15	0.10	4.70	0.25	0.09	0.15	0.09	4.49	0.24	0.10
3321F	*Adnp*$^{+/-}$	Saline/DD	0.19	0.10	5.19	0.29	0.11	0.14	0.09	4.01	0.22	0.07	0.18	0.11	5.17	0.29	0.10	0.15	0.07	3.76	0.23	0.08
3023F	*Adnp*$^{+/-}$	Saline/DD	0.17	0.10	5.64	0.26	0.11	0.15	0.09	5.09	0.24	0.09	0.15	0.10	5.30	0.26	0.09	0.16	0.10	5.33	0.25	0.09
3024F	*Adnp*$^{+/-}$	Saline/DD	0.18	0.10	4.37	0.29	0.09	0.12	0.08	2.92	0.20	0.05	0.18	0.10	4.36	0.28	0.10	0.20	0.10	4.34	0.31	0.11
3074F	*Adnp*$^{+/-}$	Saline/DD	0.14	0.10	4.49	0.25	0.09	0.19	0.08	4.96	0.27	0.08	0.16	0.10	4.74	0.26	0.10	0.16	0.08	4.79	0.24	0.07
3146F	*Adnp*$^{+/-}$	Saline/DD	0.19	0.12	5.38	0.31	0.11	0.20	0.09	4.76	0.29	0.11	0.20	0.11	5.38	0.31	0.12	0.18	0.10	4.60	0.28	0.09
2974F	*Adnp*$^{+/-}$	Saline/DD	0.17	0.11	4.76	0.27	0.09	0.19	0.08	4.82	0.27	0.07	0.17	0.09	4.52	0.27	0.10	0.20	0.08	4.93	0.28	0.08
12N4 M	*Adnp*$^{+/-}$	NAP	0.08	0.07	6.93	0.16	0.06	0.10	0.06	6.94	0.17	0.05	0.08	0.08	7.70	0.16	0.06	0.11	0.05	7.05	0.18	0.06
12N5 M	*Adnp*$^{+/-}$	NAP	0.13	0.08	4.89	0.22	0.09	0.18	0.06	5.35	0.25	0.08	0.13	0.09	4.91	0.22	0.08	0.16	0.07	5.08	0.23	0.06
7N2 M	*Adnp*$^{+/-}$	NAP	0.14	0.09	4.95	0.24	0.10	0.14	0.08	4.54	0.22	0.08	0.12	0.10	4.35	0.22	0.09	0.13	0.08	4.36	0.21	0.07
8N4 M	*Adnp*$^{+/-}$	NAP	0.15	0.15	3.95	0.31	0.09	0.15	0.12	3.31	0.28	0.04	0.14	0.13	3.64	0.28	0.08	0.23	0.06	3.66	0.30	0.11
8N5 M	*Adnp*$^{+/-}$	NAP	0.15	0.10	4.62	0.26	0.10	0.14	0.10	4.11	0.23	0.09	0.14	0.11	4.60	0.26	0.10	0.12	0.09	3.63	0.21	0.08
9N2 M	*Adnp*$^{+/-}$	NAP	0.11	0.07	5.47	0.18	0.06	0.12	0.06	5.55	0.18	0.05	0.11	0.07	5.59	0.18	0.07	0.11	0.06	5.10	0.17	0.05
10N4 M	*Adnp*$^{+/-}$	NAP	0.17	0.10	3.87	0.28	0.09	0.13	0.10	3.16	0.23	0.08	0.21	0.12	4.83	0.31	0.12	0.14	0.13	3.96	0.28	0.09
3300M	*Adnp*$^{+/-}$	NAP	0.11	0.09	4.26	0.20	0.09	0.14	0.08	4.53	0.22	0.08	0.12	0.10	4.74	0.23	0.08	0.12	0.08	4.77	0.20	0.07
3316M	*Adnp*$^{+/-}$	NAP	0.20	0.09	4.46	0.30	0.08	0.21	0.07	4.43	0.28	0.08	0.20	0.08	4.41	0.29	0.09	0.15	0.06	3.29	0.21	0.05
3328M	*Adnp*$^{+/-}$	NAP	0.15	0.09	4.62	0.25	0.07	0.18	0.06	4.71	0.26	0.08	0.15	0.07	4.16	0.22	0.08	0.14	0.07	4.07	0.22	0.05

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
3022M	*Adnp*$^{+/-}$	NAP	0.19	0.09	4.52	0.28	0.09	0.21	0.07	4.27	0.27	0.07	0.19	0.09	4.56	0.28	0.09	0.22	0.08	4.77	0.30	0.07
3017M	*Adnp*$^{+/-}$	NAP	0.21	0.11	5.69	0.33	0.10	0.20	0.08	4.98	0.29	0.06	0.20	0.09	5.35	0.30	0.10	0.21	0.07	4.99	0.28	0.08
3065M	*Adnp*$^{+/-}$	NAP	0.17	0.09	3.68	0.27	0.10	0.17	0.07	3.33	0.24	0.07	0.19	0.11	4.12	0.30	0.10	0.21	0.08	3.87	0.30	0.08
3067M	*Adnp*$^{+/-}$	NAP	0.19	0.11	4.82	0.30	0.10	0.23	0.08	4.91	0.30	0.11	0.19	0.11	5.01	0.29	0.11	0.18	0.10	4.56	0.28	0.07
2982M	*Adnp*$^{+/-}$	NAP	0.07	0.12	3.67	0.18	0.04	0.15	0.11	5.06	0.25	0.09	0.06	0.09	2.97	0.14	0.04	0.10	0.11	4.19	0.20	0.04
2995M	*Adnp*$^{+/-}$	NAP	0.21	0.12	6.00	0.33	0.11	0.19	0.10	5.06	0.29	0.09	0.22	0.12	6.20	0.34	0.12	0.17	0.09	4.64	0.25	0.08
12N2 F	*Adnp*$^{+/-}$	NAP	0.10	0.09	7.18	0.20	0.08	0.09	0.07	6.34	0.17	0.07	0.10	0.09	6.70	0.19	0.08	0.11	0.07	6.34	0.17	0.07
8N2 F	*Adnp*$^{+/-}$	NAP	0.09	0.09	5.41	0.18	0.09	0.09	0.08	5.09	0.17	0.07	0.09	0.08	5.12	0.17	0.08	0.10	0.07	4.88	0.17	0.07
9N1 F	*Adnp*$^{+/-}$	NAP	0.17	0.11	6.40	0.29	0.11	0.15	0.09	4.84	0.23	0.06	0.16	0.11	5.98	0.28	0.10	0.19	0.08	6.02	0.28	0.12
10N2 F	*Adnp*$^{+/-}$	NAP	0.07	0.06	6.43	0.13	0.06	0.08	0.07	6.87	0.14	0.07	0.07	0.06	6.67	0.13	0.06	0.07	0.07	6.27	0.14	0.06
10N3 F	*Adnp*$^{+/-}$	NAP	0.06	0.07	7.37	0.13	0.05	0.06	0.07	7.26	0.13	0.05	0.06	0.06	6.82	0.12	0.06	0.06	0.07	6.76	0.13	0.05
10N5 F	*Adnp*$^{+/-}$	NAP	0.03	0.11	6.82	0.15	0.04	0.02	0.13	6.86	0.15	0.02	0.04	0.09	6.40	0.13	0.04	0.02	0.09	4.94	0.11	0.03
11N3 F	*Adnp*$^{+/-}$	NAP	0.08	0.09	7.45	0.18	0.07	0.08	0.07	6.40	0.15	0.05	0.07	0.08	6.77	0.16	0.06	0.08	0.08	7.08	0.17	0.04
11N4 F	*Adnp*$^{+/-}$	NAP	0.11	0.09	6.26	0.20	0.07	0.09	0.07	4.72	0.15	0.05	0.10	0.08	6.13	0.18	0.07	0.11	0.08	5.95	0.18	0.07
3310F	*Adnp*$^{+/-}$	NAP	0.17	0.08	4.15	0.25	0.08	0.16	0.07	4.05	0.24	0.08	0.17	0.09	4.24	0.26	0.08	0.13	0.07	3.26	0.20	0.06
3320F	*Adnp*$^{+/-}$	NAP	0.12	0.10	4.55	0.22	0.10	0.15	0.08	5.17	0.24	0.09	0.14	0.10	4.95	0.24	0.12	0.12	0.08	4.30	0.20	0.06
3322F	*Adnp*$^{+/-}$	NAP	0.20	0.10	4.06	0.30	0.08	0.21	0.07	3.77	0.30	0.08	0.21	0.09	4.28	0.30	0.09	0.22	0.11	4.88	0.35	0.09
3325F	*Adnp*$^{+/-}$	NAP	0.18	0.09	3.69	0.26	0.09	0.19	0.07	3.48	0.26	0.06	0.18	0.09	3.58	0.27	0.09	0.21	0.06	3.55	0.27	0.07
3326F	*Adnp*$^{+/-}$	NAP	0.13	0.08	4.63	0.20	0.07	0.12	0.07	4.18	0.19	0.05	0.14	0.07	4.55	0.21	0.08	0.15	0.06	4.49	0.21	0.07
3335F	*Adnp*$^{+/-}$	NAP	0.18	0.11	5.33	0.28	0.10	0.15	0.07	3.87	0.22	0.07	0.18	0.11	5.39	0.28	0.11	0.15	0.08	4.33	0.23	0.07
3057F	*Adnp*$^{+/-}$	NAP	0.18	0.12	5.39	0.31	0.11	0.18	0.08	4.72	0.26	0.08	0.18	0.10	5.02	0.29	0.11	0.15	0.07	3.85	0.22	0.06
3072F	*Adnp*$^{+/-}$	NAP	0.11	0.08	5.98	0.19	0.08	0.10	0.06	4.84	0.15	0.06	0.11	0.08	5.98	0.19	0.08	0.12	0.07	5.94	0.19	0.07
3075F	*Adnp*$^{+/-}$	NAP	0.15	0.09	4.70	0.24	0.08	0.20	0.07	5.49	0.28	0.08	0.17	0.10	5.44	0.28	0.10	0.16	0.07	5.24	0.23	0.07
3148F	*Adnp*$^{+/-}$	NAP	0.19	0.09	4.83	0.29	0.10	0.18	0.11	4.76	0.29	0.09	0.14	0.09	3.70	0.23	0.07	0.16	0.08	4.38	0.25	0.10
2964F	*Adnp*$^{+/-}$	NAP	0.17	0.10	4.60	0.28	0.10	0.20	0.08	4.59	0.28	0.08	0.17	0.10	4.50	0.27	0.10	0.20	0.08	4.50	0.28	0.07
2965F	*Adnp*$^{+/-}$	NAP	0.19	0.09	5.42	0.29	0.10	0.19	0.08	5.58	0.28	0.09	0.18	0.10	5.45	0.29	0.09	0.17	0.08	5.08	0.25	0.07
2967F	*Adnp*$^{+/-}$	NAP	0.19	0.11	4.83	0.30	0.09	0.23	0.09	4.71	0.29	0.09	0.19	0.10	4.77	0.30	0.10	0.20	0.09	4.33	0.29	0.06

Mouse No.	Genotype	Treatment	RF Stand (s) Mean	RF Swing (s) Mean	RF Stride Length (cm) Mean	RF Step Cycle (s) Mean	RF Single Stance (s) Mean	RH Stand (s) Mean	RH Swing (s) Mean	RH Stride Length (cm) Mean	RH Step Cycle (s) Mean	RH Single Stance (s) Mean	LF Stand (s) Mean	LF Swing (s) Mean	LF Stride Length (cm) Mean	LF Step Cycle (s) Mean	LF Single Stance (s) Mean	LH Stand (s) Mean	LH Swing (s) Mean	LH Stride Length (cm) Mean	LH Step Cycle (s) Mean	LH Single Stance (s) Mean
2976F	*Adnp*$^{+/-}$	NAP	0.19	0.10	6.27	0.28	0.11	0.16	0.09	5.87	0.24	0.07	0.17	0.10	5.94	0.27	0.09	0.17	0.08	5.51	0.25	0.08
2978F	*Adnp*$^{+/-}$	NAP	0.14	0.08	5.04	0.22	0.07	0.16	0.06	5.05	0.22	0.07	0.16	0.08	5.44	0.24	0.08	0.16	0.08	5.39	0.26	0.06
2979F	*Adnp*$^{+/-}$	NAP	0.10	0.07	6.35	0.18	0.07	0.11	0.07	6.93	0.18	0.07	0.11	0.07	6.56	0.18	0.06	0.10	0.06	5.91	0.16	0.06
2987F	*Adnp*$^{+/-}$	NAP	0.20	0.11	5.18	0.31	0.10	0.21	0.08	4.72	0.27	0.08	0.19	0.12	5.17	0.30	0.10	0.19	0.08	4.76	0.27	0.08
2989F	*Adnp*$^{+/-}$	NAP	0.20	0.08	5.24	0.30	0.08	0.19	0.07	4.80	0.28	0.07	0.18	0.08	4.59	0.27	0.07	0.19	0.08	4.75	0.26	0.06
2997F	*Adnp*$^{+/-}$	NAP	0.12	0.10	6.45	0.22	0.09	0.13	0.07	6.18	0.21	0.07	0.12	0.10	6.48	0.21	0.09	0.13	0.08	6.39	0.22	0.07
2998F	*Adnp*$^{+/-}$	NAP	0.17	0.12	5.96	0.29	0.10	0.20	0.09	5.86	0.29	0.09	0.19	0.11	6.17	0.29	0.13	0.18	0.09	5.39	0.27	0.08
3000F	*Adnp*$^{+/-}$	NAP	0.21	0.09	4.99	0.29	0.09	0.21	0.08	4.91	0.30	0.08	0.16	0.09	4.36	0.25	0.08	0.21	0.08	4.88	0.27	0.07

Table S28. Raw data for motor, social and memory test results.

				Motor tests		Social and Memory tests			
Mouse No.	Genotype	Treatment	Sex	Hanging Wire	Grip Strength	Object recognition	Social memory	Social recognition cup vs. mouse	
2992	*Adnp*$^{+/+}$	Saline/DD	Male	40.71	111.90	0.06	0.07	35.40	62.32
2993	*Adnp*$^{+/+}$	Saline/DD	Male	33.46	74.70	0.65	0.60	22.60	140.00
2994	*Adnp*$^{+/+}$	Saline/DD	Male	90.00	88.38	0.51	0.20	41.20	102.84
2996	*Adnp*$^{+/+}$	Saline/DD	Male	90.00	158.74	0.15	0.23	13.56	54.80
3003	*Adnp*$^{+/+}$	Saline/DD	Male	41.64	104.72	0.67	0.14	38.56	92.56
2973	*Adnp*$^{+/+}$	Saline/DD	Male	45.98	118.48	0.00	0.39	26.28	97.52
2983	*Adnp*$^{+/+}$	Saline/DD	Male	38.40	79.68	-0.32	0.48	31.40	76.84
2984	*Adnp*$^{+/+}$	Saline/DD	Male	90.00	80.70	0.67	0.46	62.16	77.28
3019	*Adnp*$^{+/+}$	Saline/DD	Male	18.89	117.06	0.52	0.03	84.60	127.44
3020	*Adnp*$^{+/+}$	Saline/DD	Male	41.44	122.92	0.43	-0.25	87.36	138.88
3021	*Adnp*$^{+/+}$	Saline/DD	Male	41.98	124.16	0.28	0.14	46.04	172.72
3295	*Adnp*$^{+/+}$	Saline/DD	Male	44.56	80.26	0.25	-0.66	30.96	249.24
3296	*Adnp*$^{+/+}$	Saline/DD	Male	39.37	118.00	0.11	0.23	50.00	78.20
3299	*Adnp*$^{+/+}$	Saline/DD	Male	30.37	134.90	0.20	-0.20	36.96	101.08
3307	*Adnp*$^{+/+}$	Saline/DD	Male	28.54	81.78	-0.13	0.67	7.60	207.44
3308	*Adnp*$^{+/+}$	Saline/DD	Male	44.67	124.60	0.29	0.78	49.56	176.60
3315	*Adnp*$^{+/+}$	Saline/DD	Male	30.59	152.62	0.03	-0.34	35.76	122.72
3317	*Adnp*$^{+/+}$	Saline/DD	Male	25.58	86.12	-0.33	0.68	17.64	79.96
3324	*Adnp*$^{+/+}$	Saline/DD	Male	34.60	125.52	0.66	0.47	27.96	85.88
3334	*Adnp*$^{+/+}$	Saline/DD	Male	39.25	195.22	0.31	-0.05	45.04	97.88
2977	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	121.22	0.12	-0.57	41.76	92.88
2981	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	134.50	-0.05	0.36	41.60	32.60
2963	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	114.16	0.36	0.46	59.84	92.40
2968	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	103.72	0.02	0.43	47.12	91.68
3001	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	102.40	0.61	0.63	19.04	64.28
3002	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	97.96	0.64	0.62	34.08	115.36
2990	*Adnp*$^{+/+}$	Saline/DD	Female	90.00	127.78	0.57	0.77	55.76	100.40
3055	*Adnp*$^{+/+}$	Saline/DD	Female	35.08	93.33	0.71	0.10	67.80	102.92

				Motor tests		Social and Memory tests			
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Hanging Wire**	**Grip Strength**	**Object recognition**	**Social memory**	**Social recognition cup vs. mouse**	
3066	*Adnp*$^{+/+}$	Saline/DD	Female	38.30	125.12	0.26	0.41	53.60	119.76
3070	*Adnp*$^{+/+}$	Saline/DD	Female	48.11	106.08	0.05	0.34	65.48	108.08
3071	*Adnp*$^{+/+}$	Saline/DD	Female	38.21	124.06	0.11	0.10	112.52	119.44
3309	*Adnp*$^{+/+}$	Saline/DD	Female	45.29	63.74	0.36	0.17	80.28	56.56
3323	*Adnp*$^{+/+}$	Saline/DD	Female	12.99	122.28	0.40	0.07	47.20	42.72
3327	*Adnp*$^{+/+}$	Saline/DD	Female	40.96	107.96	0.20	0.10	37.96	27.92
3329	*Adnp*$^{+/+}$	Saline/DD	Female	23.68	123.84	-0.16	0.28	58.00	129.28
3004	*Adnp*$^{+/-}$	Saline/DD	Male	4.76	114.96	-0.18	0.26	32.28	61.20
2969	*Adnp*$^{+/-}$	Saline/DD	Male	7.77	106.76	-0.10	-0.34	54.04	77.80
2970	*Adnp*$^{+/-}$	Saline/DD	Male	17.51	83.30	-0.02	-0.52	45.00	158.52
2985	*Adnp*$^{+/-}$	Saline/DD	Male	10.63	51.60	-0.08	-0.26	38.56	59.64
3056	*Adnp*$^{+/-}$	Saline/DD	Male	10.36	68.78	0.00	-1.00	73.28	121.96
3069	*Adnp*$^{+/-}$	Saline/DD	Male	14.40	62.46	-0.20	0.11	41.76	186.44
3298	*Adnp*$^{+/-}$	Saline/DD	Male	20.16	60.14	0.25	0.06	27.40	183.96
3301	*Adnp*$^{+/-}$	Saline/DD	Male	6.05	65.70	-0.05	0.13	58.68	104.76
3305	*Adnp*$^{+/-}$	Saline/DD	Male	14.14	100.56	-0.24	0.20	78.20	75.40
3311	*Adnp*$^{+/-}$	Saline/DD	Male	18.66	56.32	-0.11	-0.44	36.56	126.24
3330	*Adnp*$^{+/-}$	Saline/DD	Male	12.61	52.88	-0.36	0.07	20.80	118.36
3336	*Adnp*$^{+/-}$	Saline/DD	Male	28.54	68.64	-0.11	-0.32	56.24	101.12
2974	*Adnp*$^{+/-}$	Saline/DD	Female	90.00	83.44	-0.15	0.65	56.04	73.76
3023	*Adnp*$^{+/-}$	Saline/DD	Female	90.00	108.06	0.10	-0.15	84.72	144.40
3024	*Adnp*$^{+/-}$	Saline/DD	Female	37.66	83.53	-0.09	-0.82	60.80	131.68
3074	*Adnp*$^{+/-}$	Saline/DD	Female	30.31	94.32	0.32	-0.22	91.48	95.08
3146	*Adnp*$^{+/-}$	Saline/DD	Female	20.27	81.82	-0.04	0.00	66.24	2.76
3314	*Adnp*$^{+/-}$	Saline/DD	Female	8.89	121.50	0.01	0.15	28.96	47.96
3321	*Adnp*$^{+/-}$	Saline/DD	Female	90.00	73.43	0.03	-0.08	20.32	79.96
2971	*Adnp*$^{+/+}$	NAP	Male	24.05	131.98	0.13	-0.05	35.20	130.16
2972	*Adnp*$^{+/+}$	NAP	Male	90.00	123.38	0.80	0.42	52.12	110.88
2986	*Adnp*$^{+/+}$	NAP	Male	35.89	127.48	0.15	0.21	37.64	71.24
3005	*Adnp*$^{+/+}$	NAP	Male	90.00	106.94	0.41	0.94	23.64	136.20

				Motor tests		Social and Memory tests			
Mouse No.	Genotype	Treatment	Sex	Hanging Wire	Grip Strength	Object recognition	Social memory	Social recognition cup vs. mouse	
3053	*Adnp*$^{+/+}$	NAP	Male	39.07	124.16	0.04	0.41	62.72	99.08
3073	*Adnp*$^{+/+}$	NAP	Male	90.00	125.92	0.61	0.02	88.28	89.88
3147	*Adnp*$^{+/+}$	NAP	Male	29.95	108.78	0.00	-0.25	75.00	164.64
3294	*Adnp*$^{+/+}$	NAP	Male	24.85	63.72	0.11	0.27	80.32	91.68
3297	*Adnp*$^{+/+}$	NAP	Male	8.52	78.62	-0.38	-0.09	71.72	108.40
3303	*Adnp*$^{+/+}$	NAP	Male	90.00	84.26	-0.07	0.63	45.28	135.60
3312	*Adnp*$^{+/+}$	NAP	Male	60.36	114.64	0.40	0.35	28.96	261.76
3333	*Adnp*$^{+/+}$	NAP	Male	47.28	111.60	0.33	-0.40	84.48	163.24
2966	*Adnp*$^{+/+}$	NAP	Female	64.58	118.82	-0.16	-0.01	58.76	122.16
2988	*Adnp*$^{+/+}$	NAP	Female	90.00	110.68	-0.19	0.68	28.96	85.44
2991	*Adnp*$^{+/+}$	NAP	Female	37.56	113.22	0.03	0.75	16.68	79.92
2975	*Adnp*$^{+/+}$	NAP	Female	71.86	93.82	0.15	0.62	38.60	30.68
2980	*Adnp*$^{+/+}$	NAP	Female	90.00	95.12	0.39	0.59	55.48	91.56
2999	*Adnp*$^{+/+}$	NAP	Female	90.00	113.64	0.03	0.90	17.72	13.32
3018	*Adnp*$^{+/+}$	NAP	Female	90.00	114.18	0.33	0.24	56.84	72.76
3025	*Adnp*$^{+/+}$	NAP	Female	62.69	129.18	0.26	-0.13	48.12	112.44
3054	*Adnp*$^{+/+}$	NAP	Female	90.00	116.18	0.17	0.12	46.12	144.44
3068	*Adnp*$^{+/+}$	NAP	Female	90.00	90.20	0.43	0.38	62.00	9.48
3302	*Adnp*$^{+/+}$	NAP	Female	40.44	96.62	0.29	-0.06	21.28	101.32
3304	*Adnp*$^{+/+}$	NAP	Female	22.24	81.70	0.22	-0.25	62.64	64.36
3306	*Adnp*$^{+/+}$	NAP	Female	9.37	100.18	0.17	-0.14	38.16	66.36
3313	*Adnp*$^{+/+}$	NAP	Female	12.28	98.02	0.14	0.01	44.00	114.84
3318	*Adnp*$^{+/+}$	NAP	Female	20.64	156.80	0.35	-0.02	53.16	37.84
3319	*Adnp*$^{+/+}$	NAP	Female	53.91	120.66	0.04	0.93	44.24	110.76
3331	*Adnp*$^{+/+}$	NAP	Female	64.63	106.82	0.46	0.71	38.12	118.88
3332	*Adnp*$^{+/+}$	NAP	Female	43.41	109.46	-0.69	0.93	19.32	40.48
3335	*Adnp*$^{+/+}$	NAP	Female	46.33	103.46	0.41	0.04	33.72	108.08
2995	*Adnp*$^{+/-}$	NAP	Male	90.00	112.34	0.27	0.95	42.40	80.72
2982	*Adnp*$^{+/-}$	NAP	Male	90.00	167.08	0.31	0.82	29.24	130.32
3022	*Adnp*$^{+/-}$	NAP	Male	90.00	111.86	0.22	0.10	56.44	169.72

				Motor tests		Social and Memory tests			
Mouse No.	**Genotype**	**Treatment**	**Sex**	**Hanging Wire**	**Grip Strength**	**Object recognition**	**Social memory**	**Social recognition cup vs. mouse**	
3017	*Adnp*$^{+/-}$	NAP	Male	38.43	161.38	0.03	0.28	31.8	110.68
3065	*Adnp*$^{+/-}$	NAP	Male	38.48	106.42	-0.03	-0.14	70.2	73.32
3067	*Adnp*$^{+/-}$	NAP	Male	35.99	93.25	-0.18	-0.05	36.44	113.24
3300	*Adnp*$^{+/-}$	NAP	Male	20.77	56.24	0.31	-0.21	63.8	72.68
3316	*Adnp*$^{+/-}$	NAP	Male	27.54	148.14	0.48	1.00	111.92	27.92
3328	*Adnp*$^{+/-}$	NAP	Male	36.65	108.84	-0.03	0.07	41.8	91.24
2964	*Adnp*$^{+/-}$	NAP	Female	90.00	84.68	-0.09	0.40	37.20	108.36
2965	*Adnp*$^{+/-}$	NAP	Female	90.00	107.60	0.36	0.33	10.92	137.96
2967	*Adnp*$^{+/-}$	NAP	Female	90.00	77.24	0.41	0.98	19.52	4.60
2987	*Adnp*$^{+/-}$	NAP	Female	90.00	95.60	0.26	0.75	26.92	70.60
2989	*Adnp*$^{+/-}$	NAP	Female	90.00	95.16	0.31	0.38	28.12	179.08
2976	*Adnp*$^{+/-}$	NAP	Female	12.22	72.84	0.50	0.11	65.08	117.64
2978	*Adnp*$^{+/-}$	NAP	Female	90.00	99.46	0.92	1.00	60.28	62.40
2979	*Adnp*$^{+/-}$	NAP	Female	90.00	100.43	1.00	0.19	7.12	148.24
2997	*Adnp*$^{+/-}$	NAP	Female	90.00	127.75	0.64	0.25	52.36	102.92
2998	*Adnp*$^{+/-}$	NAP	Female	90.00	121.04	0.05	0.46	40.92	87.60
3000	*Adnp*$^{+/-}$	NAP	Female	90.00	147.70	0.00	0.40	8.28	23.68
3057	*Adnp*$^{+/-}$	NAP	Female	38.06	94.64	-0.10	0.71	45.28	105.52
3072	*Adnp*$^{+/-}$	NAP	Female	61.56	112.96	-0.07	0.02	26.88	85.40
3075	*Adnp*$^{+/-}$	NAP	Female	46.35	103.68	0.17	-0.20	88.00	77.16
3148	*Adnp*$^{+/-}$	NAP	Female	26.35	111.32	0.04	0.01	82.60	54.80
3310	*Adnp*$^{+/-}$	NAP	Female	11.46	81.03	0.15	-0.15	45.52	33.68
3320	*Adnp*$^{+/-}$	NAP	Female	14.96	119.66	0.86	0.41	38.48	33.20
3322	*Adnp*$^{+/-}$	NAP	Female	37.15	116.18	0.25	0.91	36.52	12.12
3325	*Adnp*$^{+/-}$	NAP	Female	38.14	100.02	0.37	0.33	26.56	140.04
3326	*Adnp*$^{+/-}$	NAP	Female	90.00	107.06	-0.14	-0.24	12.88	66.92

Table S29. Raw data for odor discrimination test results.

				Water			Vanilla			Almond		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
2992	*Adnp*$^{+/+}$	Saline/DD	Male	13.24	7.48	4.40	15.24	19.00	0.36	4.72	1.08	11.88
2993	*Adnp*$^{+/+}$	Saline/DD	Male	18.48	22.20	18.40	19.24	12.00	13.80	19.36	11.28	7.20
2994	*Adnp*$^{+/+}$	Saline/DD	Male	13.00	16.24	4.28	11.96	5.80	7.77	21.75	2.76	0.16
2996	*Adnp*$^{+/+}$	Saline/DD	Male	7.96	14.48	14.16	8.40	3.88	1.08	13.44	3.96	3.80
3003	*Adnp*$^{+/+}$	Saline/DD	Male	16.40	24.52	8.36	23.76	16.64	18.54	19.20	31.12	9.64
2973	*Adnp*$^{+/+}$	Saline/DD	Male	10.40	10.72	12.44	22.60	5.76	0.00	0.32	3.16	1.28
2983	*Adnp*$^{+/+}$	Saline/DD	Male	23.99	11.92	12.96	14.04	11.48	5.32	8.52	9.16	16.04
2984	*Adnp*$^{+/+}$	Saline/DD	Male	19.64	18.56	7.64	15.59	11.36	18.16	16.32	16.60	13.56
3019	*Adnp*$^{+/+}$	Saline/DD	Male	17.80	14.40	8.32	26.44	2.96	9.91	27.42	6.92	3.64
3020	*Adnp*$^{+/+}$	Saline/DD	Male	17.52	14.20	19.48	20.28	13.40	7.68	6.72	7.76	0.40
3021	*Adnp*$^{+/+}$	Saline/DD	Male	6.16	11.00	13.96	14.40	18.72	8.22	19.04	5.40	6.76
2977	*Adnp*$^{+/+}$	Saline/DD	Female	17.52	11.04	10.00	24.16	6.12	9.32	29.44	4.76	6.36
2981	*Adnp*$^{+/+}$	Saline/DD	Female	21.04	18.80	8.99	6.84	21.56	3.11	25.60	7.80	2.25
2963	*Adnp*$^{+/+}$	Saline/DD	Female	13.20	11.08	23.18	10.76	9.12	3.70	21.72	8.00	4.39
2968	*Adnp*$^{+/+}$	Saline/DD	Female	18.92	8.56	7.44	0.00	7.56	4.08	10.36	0.00	2.11
3001	*Adnp*$^{+/+}$	Saline/DD	Female	25.16	9.56	5.40	26.40	19.28	3.96	1.12	13.88	8.24
3002	*Adnp*$^{+/+}$	Saline/DD	Female	12.76	11.88	6.12	18.04	20.23	1.52	13.32	4.01	12.75
2990	*Adnp*$^{+/+}$	Saline/DD	Female	10.36	18.84	10.45	21.39	10.52	7.96	16.20	17.08	5.52
3055	*Adnp*$^{+/+}$	Saline/DD	Female	23.52	16.80	18.79	29.48	23.84	11.92	15.00	3.72	2.84
3066	*Adnp*$^{+/+}$	Saline/DD	Female	9.64	17.64	13.98	17.92	14.80	3.08	11.96	13.12	4.24
3070	*Adnp*$^{+/+}$	Saline/DD	Female	11.04	0.00	7.08	18.04	2.24	0.28	13.92	4.76	6.00
3071	*Adnp*$^{+/+}$	Saline/DD	Female	6.92	5.28	3.92	27.88	15.76	13.04	23.32	16.08	13.64
3004	*Adnp*$^{+/-}$	Saline/DD	Male	10.16	16.56	13.48	27.00	9.04	10.74	24.04	5.05	6.72
2969	*Adnp*$^{+/-}$	Saline/DD	Male	5.40	4.48	8.88	11.52	6.00	6.56	17.28	5.56	4.92
2970	*Adnp*$^{+/-}$	Saline/DD	Male	27.96	21.80	11.20	21.26	28.02	5.00	4.41	0.00	0.00
2985	*Adnp*$^{+/-}$	Saline/DD	Male	17.32	18.92	15.56	17.52	24.68	4.94	10.58	4.08	4.48
3056	*Adnp*$^{+/-}$	Saline/DD	Male	6.28	3.08	1.88	13.48	1.36	2.24	10.39	0.00	7.80
3069	*Adnp*$^{+/-}$	Saline/DD	Male	16.68	20.20	6.52	8.76	11.60	1.20	24.51	9.60	11.92

				Water			Vanilla			Almond		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
2974	*Adnp*$^{+/-}$	Saline/DD	Female	21.16	7.76	3.68	5.96	2.20	0.60	6.88	2.84	7.29
3023	*Adnp*$^{+/-}$	Saline/DD	Female	26.24	20.92	10.50	18.22	8.64	3.92	10.20	16.96	2.92
3024	*Adnp*$^{+/-}$	Saline/DD	Female	27.52	20.68	16.84	14.26	13.96	19.54	19.82	15.87	16.42
3074	*Adnp*$^{+/-}$	Saline/DD	Female	19.52	7.96	7.88	26.48	17.16	12.95	9.00	9.36	5.24
3146	*Adnp*$^{+/-}$	Saline/DD	Female	7.96	8.96	4.52	11.89	15.20	6.50	17.32	12.60	15.60
2971	*Adnp*$^{+/+}$	NAP	Male	15.76	12.72	12.07	14.24	8.36	2.85	8.21	5.20	0.48
2972	*Adnp*$^{+/+}$	NAP	Male	29.12	12.20	7.76	10.50	8.64	3.16	11.40	5.16	5.84
2986	*Adnp*$^{+/+}$	NAP	Male	28.12	28.64	9.88	8.76	6.16	7.46	14.56	3.84	8.20
3005	*Adnp*$^{+/+}$	NAP	Male	13.72	14.32	6.60	11.92	11.20	6.13	8.20	3.28	5.00
3053	*Adnp*$^{+/+}$	NAP	Male	7.92	14.76	11.48	16.88	15.64	7.01	25.84	2.96	5.84
3073	*Adnp*$^{+/+}$	NAP	Male	22.12	6.32	3.88	18.64	8.92	5.37	26.96	3.24	15.48
3147	*Adnp*$^{+/+}$	NAP	Male	24.32	13.32	8.20	23.81	11.28	10.06	6.30	0.00	0.00
2966	*Adnp*$^{+/+}$	NAP	Female	38.84	17.40	8.28	12.56	0.00	0.00	7.08	1.72	0.12
2988	*Adnp*$^{+/+}$	NAP	Female	18.76	14.00	7.24	10.16	2.40	0.16	1.28	9.08	5.36
2991	*Adnp*$^{+/+}$	NAP	Female	14.00	16.16	11.40	14.68	18.80	16.92	9.08	15.48	13.12
2975	*Adnp*$^{+/+}$	NAP	Female	26.68	26.40	17.68	31.72	24.35	19.24	34.60	80.84	88.04
2980	*Adnp*$^{+/+}$	NAP	Female	23.76	29.24	7.92	33.88	8.52	12.84	35.44	15.96	12.68
2999	*Adnp*$^{+/+}$	NAP	Female	18.72	10.56	13.12	7.24	16.28	6.52	11.16	5.88	0.00
3018	*Adnp*$^{+/+}$	NAP	Female	10.24	21.08	16.59	14.64	12.74	4.12	10.44	3.4	2.04
3025	*Adnp*$^{+/+}$	NAP	Female	11.24	15.64	1.44	26.8	21.07	14.11	29.99	34.4	5.8
3054	*Adnp*$^{+/+}$	NAP	Female	7.64	10.84	9.88	22.34	2.04	4.64	10.92	18.63	9.48
3068	*Adnp*$^{+/+}$	NAP	Female	6.08	5.56	1.56	5.48	2.72	8.36	5.58	1.68	0.64
2995	*Adnp*$^{+/-}$	NAP	Male	29.96	16.72	1.76	8.33	2.52	2.08	5.16	0.00	0.28
2982	*Adnp*$^{+/-}$	NAP	Male	17.32	30.96	14.33	18.52	12.36	6.59	12.20	9.00	3.53
3022	*Adnp*$^{+/-}$	NAP	Male	18.00	11.08	6.20	24.17	18.60	5.55	17.12	1.84	4.16
3017	*Adnp*$^{+/-}$	NAP	Male	4.48	11.52	9.80	20.88	9.64	5.76	18.68	9.08	12.32
3065	*Adnp*$^{+/-}$	NAP	Male	21.16	12.96	13.96	16.64	12.28	15.35	17.74	9.48	7.16
3067	*Adnp*$^{+/-}$	NAP	Male	2.80	0.00	9.40	24.08	0.00	2.36	7.28	5.52	2.24
2964	*Adnp*$^{+/-}$	NAP	Female	31.36	18.24	14.80	30.28	18.04	0.76	10.28	1.36	1.16
2965	*Adnp*$^{+/-}$	NAP	Female	23.32	15.20	11.76	31.80	5.44	3.68	44.48	6.48	0.00

				Water			Vanilla			Almond		
Mouse No.	**Genotype**	**Treatment**	**Sex**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
2967	*Adnp*$^{+/-}$	NAP	Female	21.44	5.36	8.48	0.00	-	0.00	0.00	0.00	0.00
2987	*Adnp*$^{+/-}$	NAP	Female	12.32	26.88	27.08	30.92	25.56	12.97	17.28	13.28	8.48
2989	*Adnp*$^{+/-}$	NAP	Female	22.12	7.72	10.36	36.60	32.56	7.68	32.72	14.68	15.44
2976	*Adnp*$^{+/-}$	NAP	Female	26.72	15.84	0.00	43.04	0.00	0.00	0.00	0.00	0.00
2978	*Adnp*$^{+/-}$	NAP	Female	70.76	55.20	11.56	16.16	15.04	9.86	31.62	31.60	0.97
2979	*Adnp*$^{+/-}$	NAP	Female	9.20	9.16	0.92	4.80	0.00	0.00	0.44	0.04	3.64
2997	*Adnp*$^{+/-}$	NAP	Female	27.56	23.44	26.04	30.12	11.88	14.76	18.08	25.60	16.08
2998	*Adnp*$^{+/-}$	NAP	Female	11.60	13.32	33.80	38.76	17.24	5.90	46.36	14.08	16.79
3000	*Adnp*$^{+/-}$	NAP	Female	19.48	17.88	11.24	21.92	19.20	1.88	7.20	3.32	15.00
3057	*Adnp*$^{+/-}$	NAP	Female	26.36	22.96	80.76	48.32	33.68	56.04	9.84	1.12	3.68
3072	*Adnp*$^{+/-}$	NAP	Female	7.76	2.76	7.00	18.48	10.56	9.36	22.24	11.28	33.60
3075	*Adnp*$^{+/-}$	NAP	Female	19.00	27.68	23.20	29.72	11.44	10.96	21.48	24.68	11.48
3148	*Adnp*$^{+/-}$	NAP	Female	33.92	0.00	0.28	47.52	0.32	9.20	1.44	7.00	0.08

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