

SUPPLEMENTARY INFORMATION:

Supplementary Table S1. Mouse Cohorts; Genotype, Gender and Age

Assay	Null		WT	
	Gender	Age	Gender	Age
Instrumental responding for food	M	137 days	M	137 days
	M	98 days	M	98 days
	M	82 days	M	82 days
	M	118 days	M	118 days
	M	123 days	M	118 days
	M	175 days	M	161 days
			M	213 days
			M	82 days
	F	144 days	F	137 days
	F	212 days	F	212 days
	F	213 days	F	213 days
	F	82 days	F	82 days
	F	98 days	F	82 days
	F	128 days	F	169 days
	F	147 days	F	175 days
	F	115 days	F	116 days
	F	120 days	F	98 days
	F	118 days	F	82 days
Working memory task	M	82 days	M	82 days
	M	98 days	M	82 days
			M	82 days
	F	82 days	F	82 days
	F	98 days	F	82 days
			F	98 days
			F	82 days
Rotarod	M	129 days	M	129 days
	M	129 days	M	178 days
	M	178 days	M	178 days
	M	178 days		

	F 93 days		F 87 days
	F 93 days		F 97 days
	F 96 days		F 97 days
	F 129 days		F 129 days
	F 178 days		F 178 days
Forced Swim	M 129 days		M 129 days
	M 129 days		M 178 days
	M 178 days		M 178 days
	M 178 days		
	F 93 days		F 87 days
	F 93 days		F 97 days
	F 96 days		F 97 days
	F 129 days		F 129 days
	F 178 days		F 178 days
	F 194 days		F 225 days
	F 225 days		F 225 days
CBC and Chemistry	F 4 mo		F 4 mo
	F 4 mo		F 4 mo
	F 4 mo		F 4 mo
	F 5 mo		F 4 mo
	F 5 mo		F 5 mo
			F 5 mo
Ca and Vitamin D	M 4 mo		M 4 mo
	M 4 mo		M 4 mo
	M 6 mo		M 6 mo
			M 6 mo
	F 6 mo		F 6 mo
	F 6 mo		F 8 mo
	F 6 mo		F 8 mo
	F 6 mo		
	F 6 mo		
	F 8 mo		
	F 8 mo		

Supplementary Table S2. Blood Chemistry, Complete Blood Counts and Manual

Differential.

Shading in the null column indicates values that fell outside of the 90% confidence intervals established on the basis of a cohort 47 WT mice. Shading in the WT column indicates values that differed significantly from null values.

	Units	90% CI (N=47)	AVG Null (N=5)	AVG WT (N=6)
Chemistry				
GLU	mg/dL	110-260	170.6	162.60
BUN	mg/dL	15-34	23	22.00
CREA	mg/dL	0.1-0.3	0.2	0.20
NA	mmol/L	148-156	148.8	151.50
K	mmol/L	6.3-9.9	8.2	8.22
CL	mmol/L	105-114	108	107.00
CA	mg/dL	9.50-10.63	9.38	9.96
ALB	g/dL	2.4-3.4	3.22	3.20
T Protein	g/dL	4.8-5.8	5.36	5.27
T Bili	mg/dL	0.10-0.31	0.366	0.19
ALT	U/L	16-131	49.8	51.83
AST	U/L	36-149	150.6	75.60
GGT	U/L	0-3	0	0.17
PHOS	mg/dL	7.6-12.0	10.3	8.78
Complete Blood Count				
WBC	K/ μ L	4.85-12.35	11.122	8.07
RBC	M/ μ L	8.80-10.92	9.534	10.04
HGB	g/dL	13.5-16.3	14.52	15.07
HCT	%	43.3-52.3	46.68	48.22
MCV	fL	45.5-52.2	49.02	48.03
MCH	pg	14.2-15.7	15.24	15.02
MCHC	g/dL	28.0-32.1	31.1	31.23
RDW	%	17.6-22.7	20.36	20.98
PLT	K/ μ L	916-1671	1195.6	1314.50
MPV	fL	6.1-6.7	6.66	6.67
Manual Differential				

NEUT ABS	K/ μ L	0.27-3.18	1.16	1.17
LYMPHS ABS	K/ μ L	3.56-10.67	9.388	6.35
MONOS ABS	K/ μ L	0.07-1.10	0.474	0.48
EOS ABS	K/ μ L	0.00-0.45	0.1	0.08
BASOS ABS	K/ μ L	0.00-0.00	0	0.00
SEGS	%	2-39	10.6	12.67
BANDS	%	0-3	0.4	1.17
LYMPHS	%	56-95	83.8	79.17
MONOS	%	1-13	4.4	6.00
EOS	%	0-5	0.8	1.00
BASOS	%	0-0	0	0.00
ATYP				
LYMPHOS	%	0-0	0	0.00

**Supplementary Table S3. Lphn3 Transcriptome
Experimental Factors**

Factor	Factor Description	Levels
Genotype	Lphn3 gene	WT Null
Time	Age, time since birth	4 days 1 month 6 months
Tissue	Brain region	PFC striatum hippocampus