

Supplementary Table-1.

Experiment	Figure	Sample size					
		WT (control)			KI (HMBS-deficient)		
		sex	genotype	condition	sex	genotype	condition
Phenotyper	1A-B	6	12	in vivo	6	12	in vivo
SPT	1C	11-12	23	in vivo	15-19	34	in vivo
NSF	1D	11-12	23	in vivo	15-19	34	in vivo
TST	1F	6-9	15	in vivo	13-14	27	in vivo
LD	1G	11-12	23	in vivo	15-19	34	in vivo
EPM	1H	11-12	23	in vivo	15-19	34	in vivo
RNAseq	2A-B	6 males	6	hippocampus	6 males	6	hippocampus
Myelin IHC	3A-F	4-6	10	sections	6	12	sections
Mitochondria enzyme activity	4A-D	4-6	10	hippocampus	4-6	10	hippocampus
Mitochondrial membrane potential	4E-F		12	cells		9	cells
Neurogenesis	5A-H	6	12	sections	6	12	sections
Electrophysiology	6A-E	6-7	13	hippocampus	4	8	hippocampus

Supplementary Table-1. Description of samples. Samples sizes (with sex and genotype) are reported according to experimental procedure.