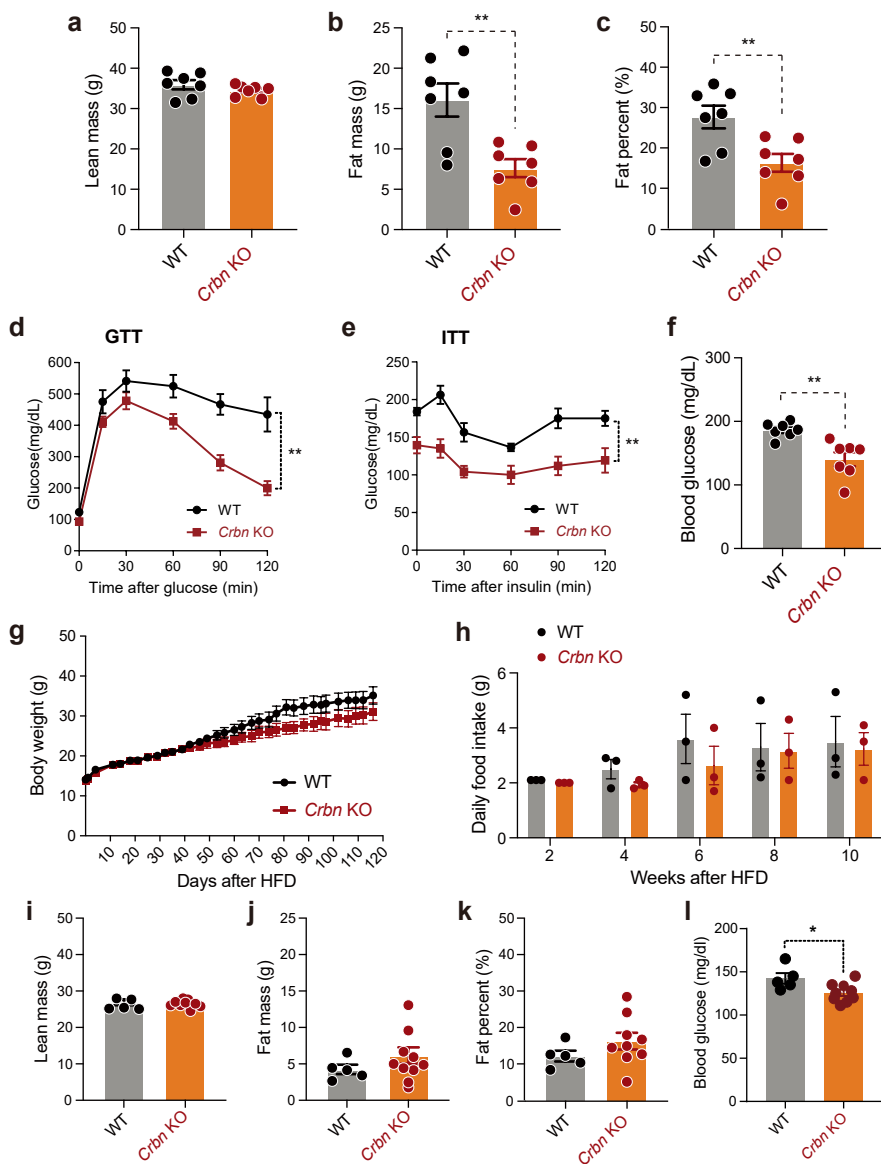
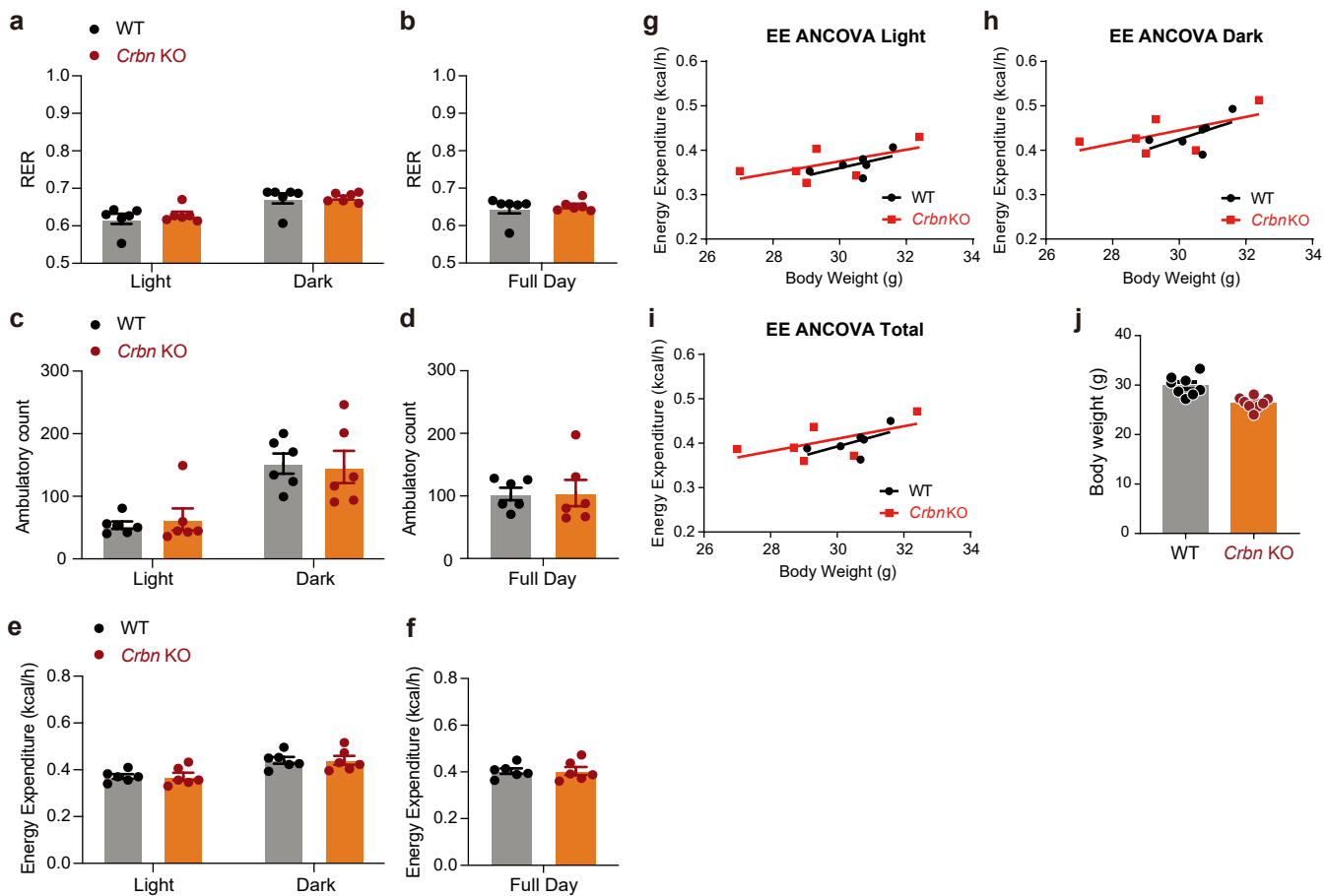


Supplementary Fig. S1



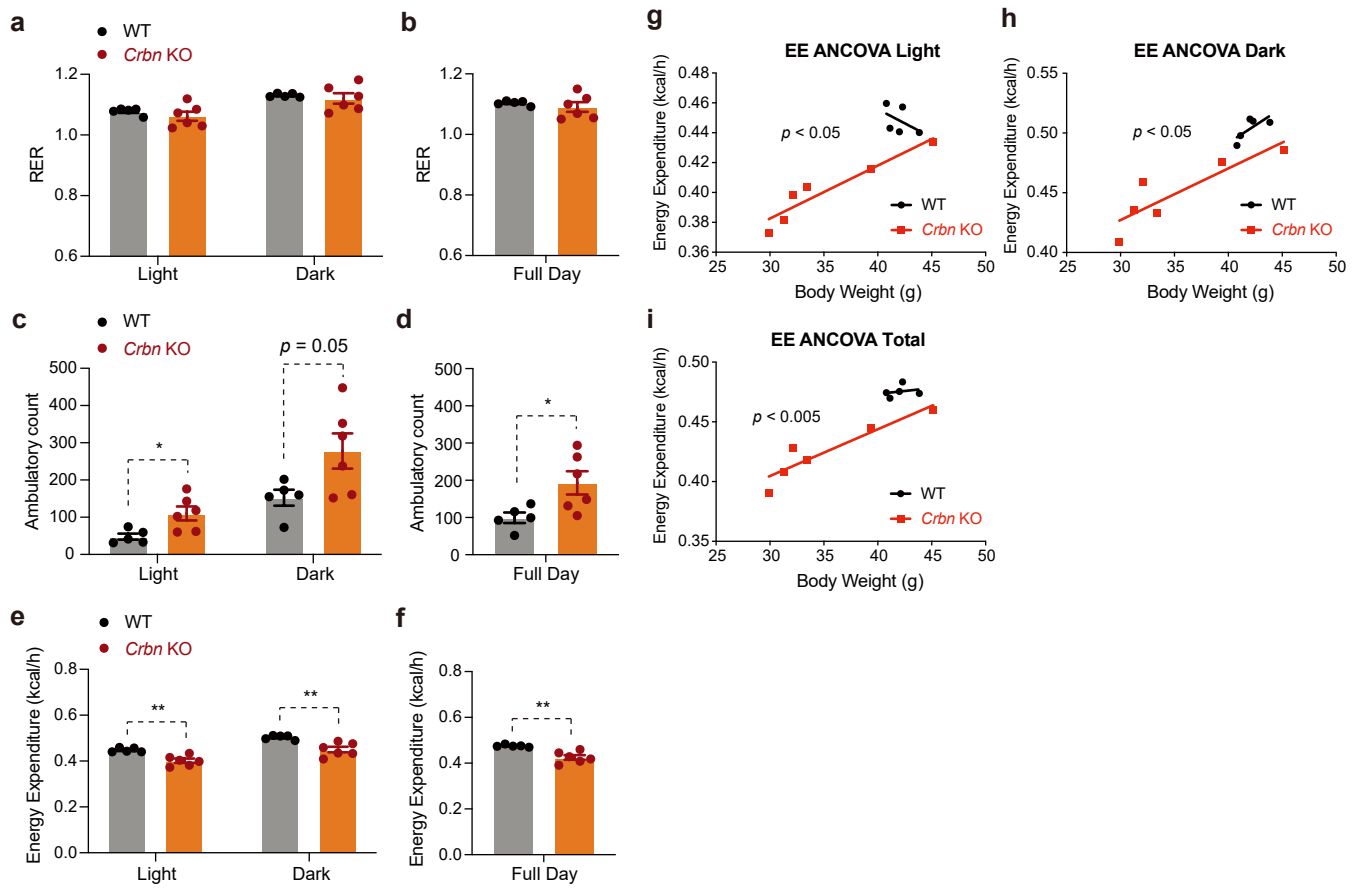
Supplementary Fig. S2

Normal chow diet

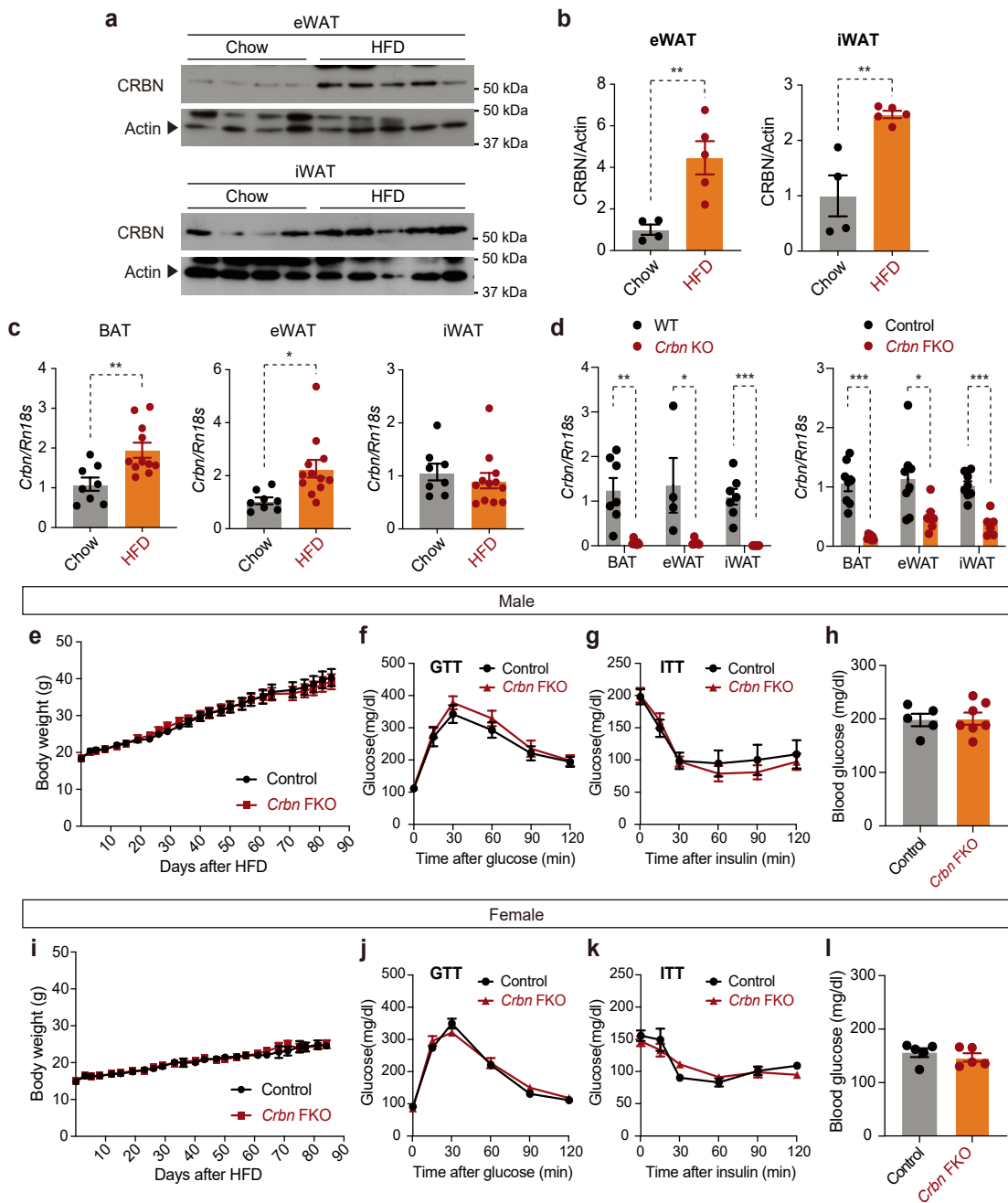


Supplementary Fig. S3

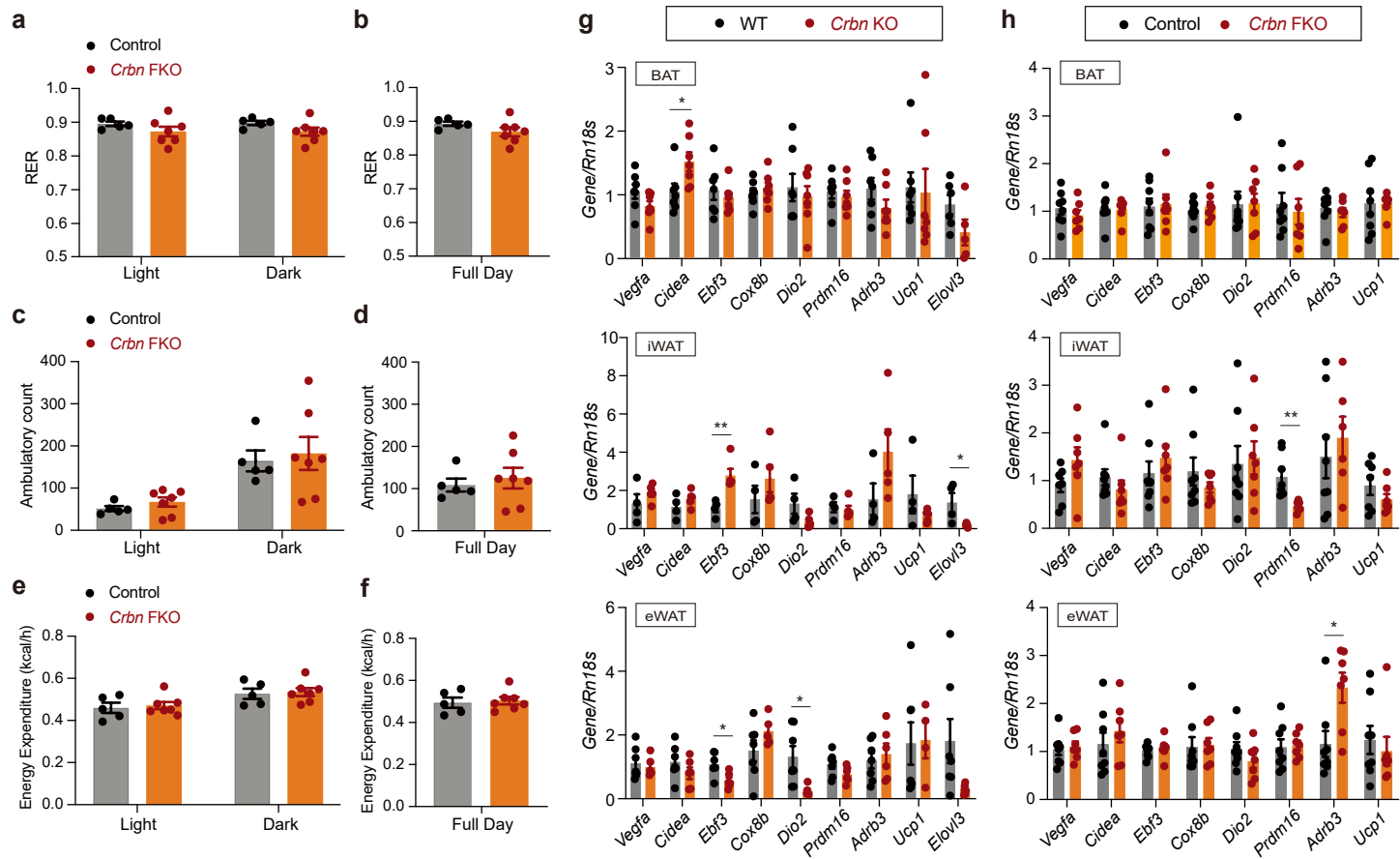
60%kcal high-fat diet



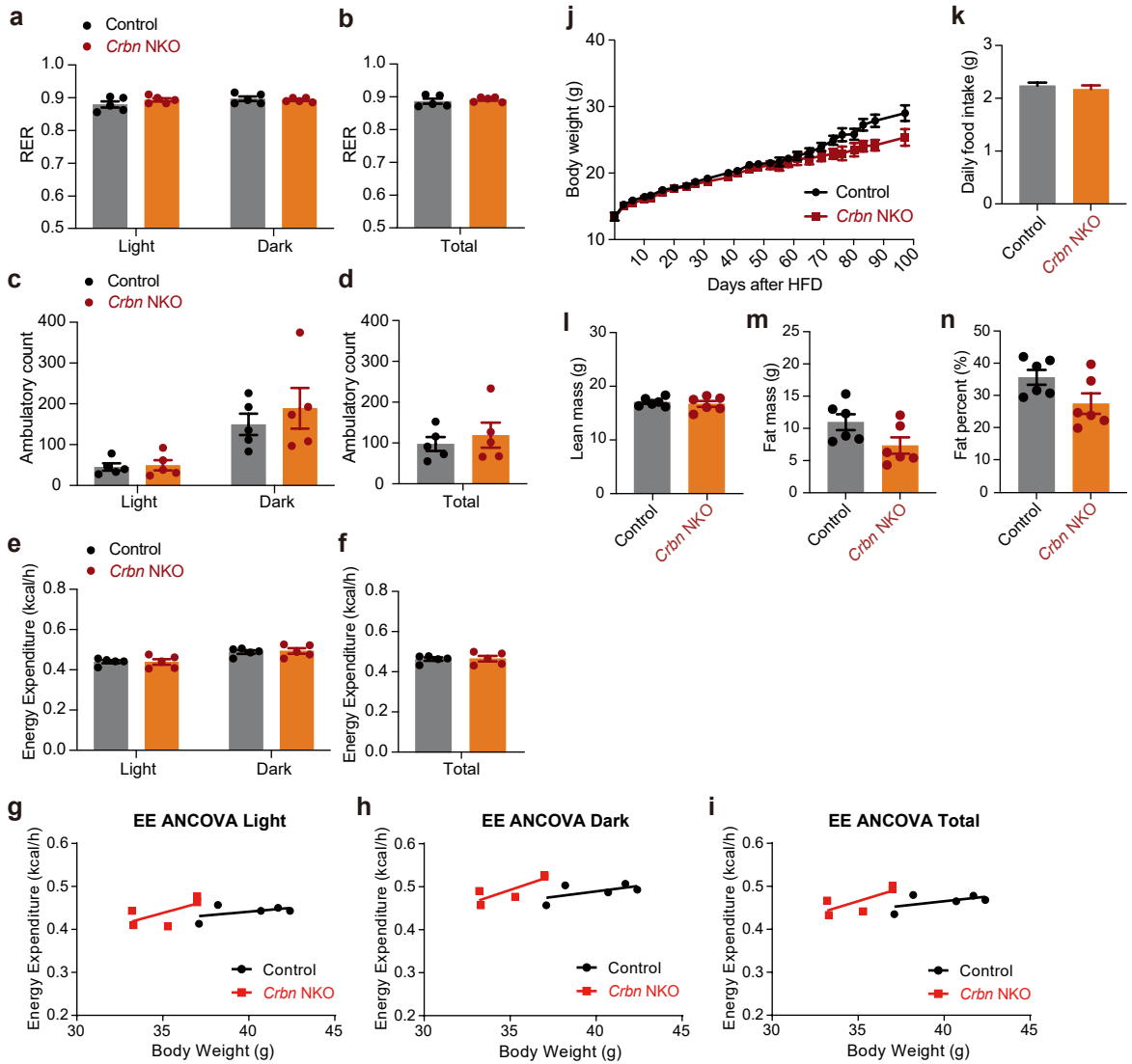
Supplementary Fig. S4



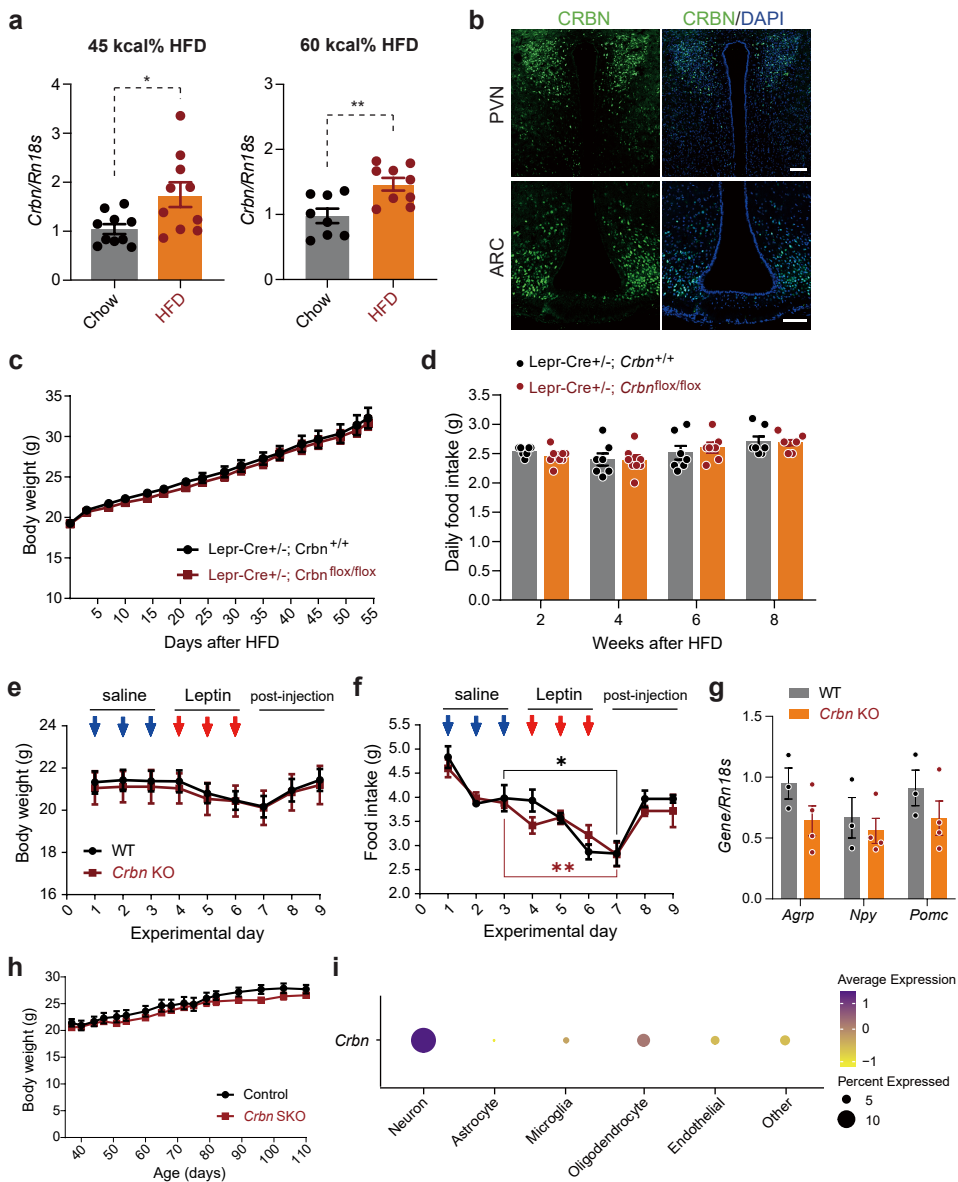
Supplementary Fig. S5



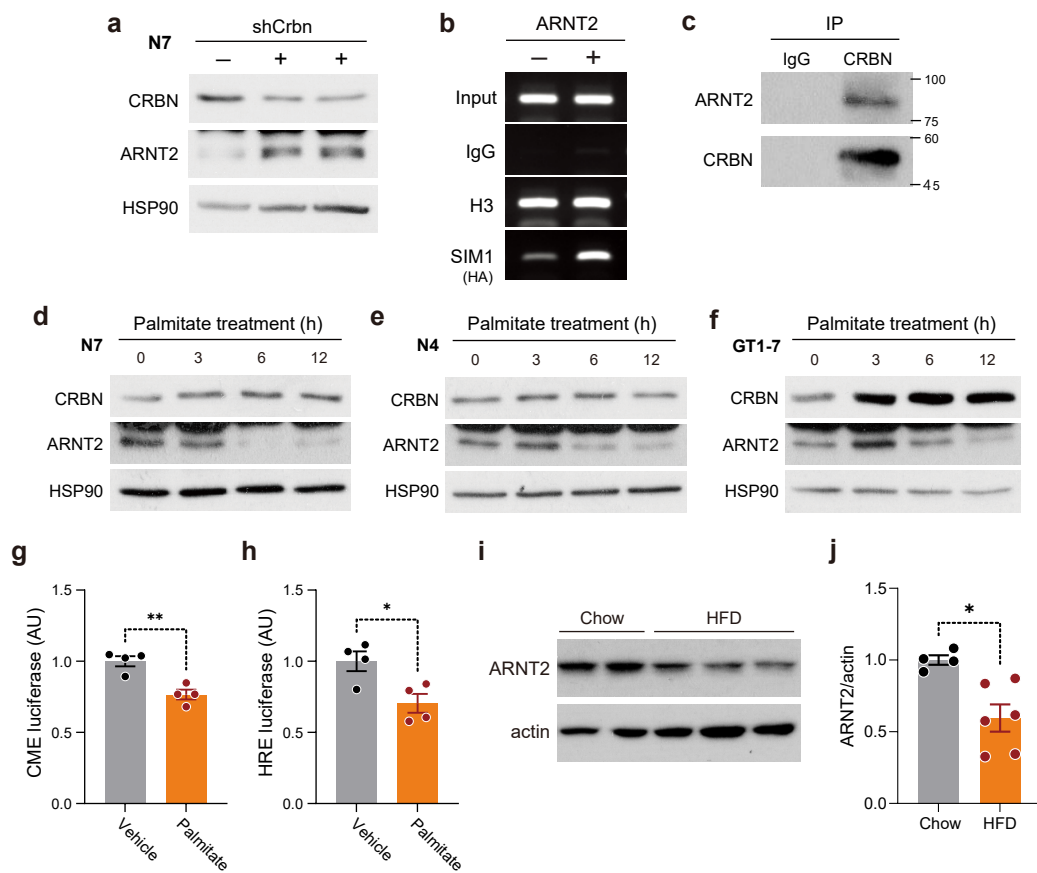
Supplementary Fig. S6



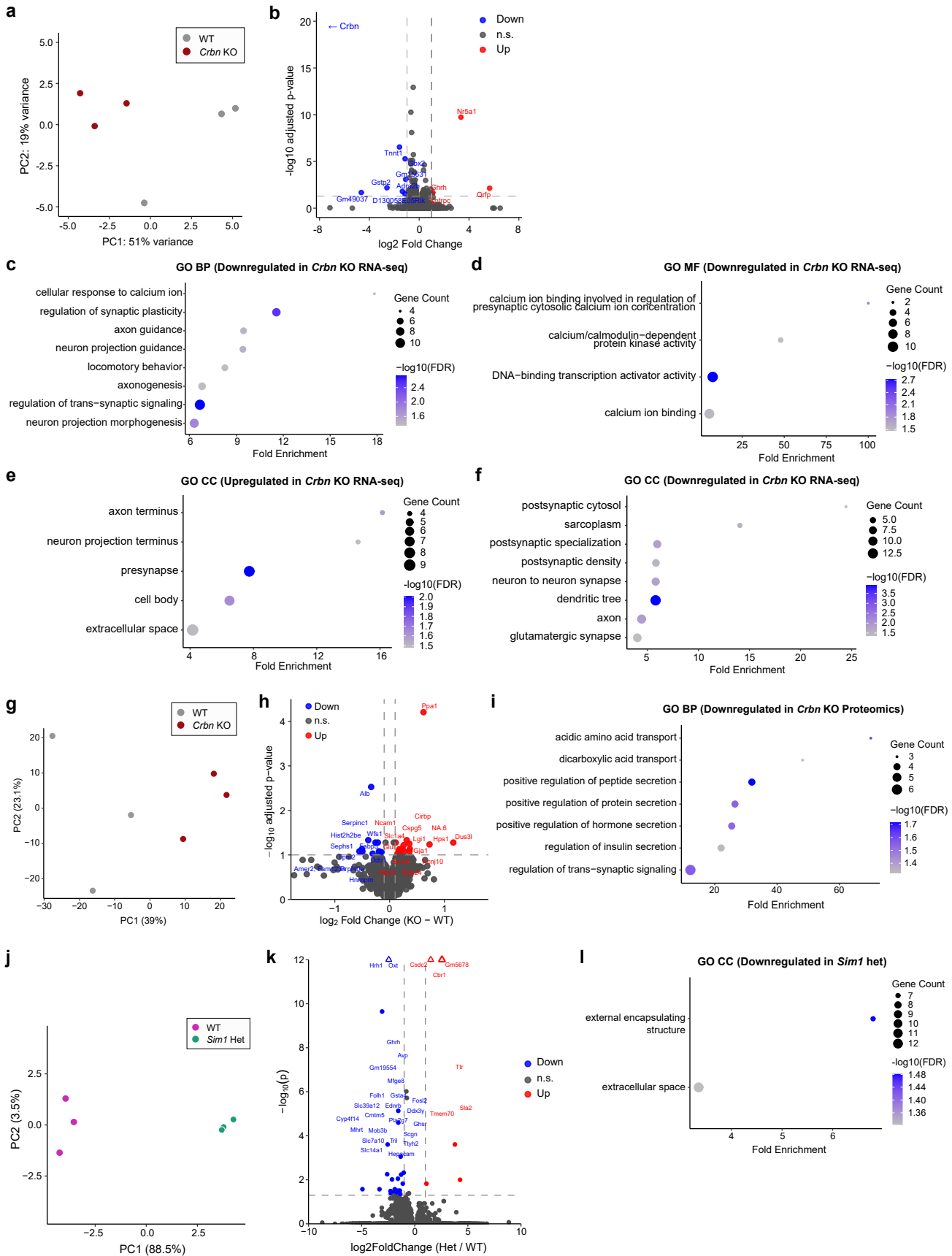
Supplementary Fig. S7



Supplementary Fig. S8



Supplementary Fig. S9



Supplementary Fig. S10

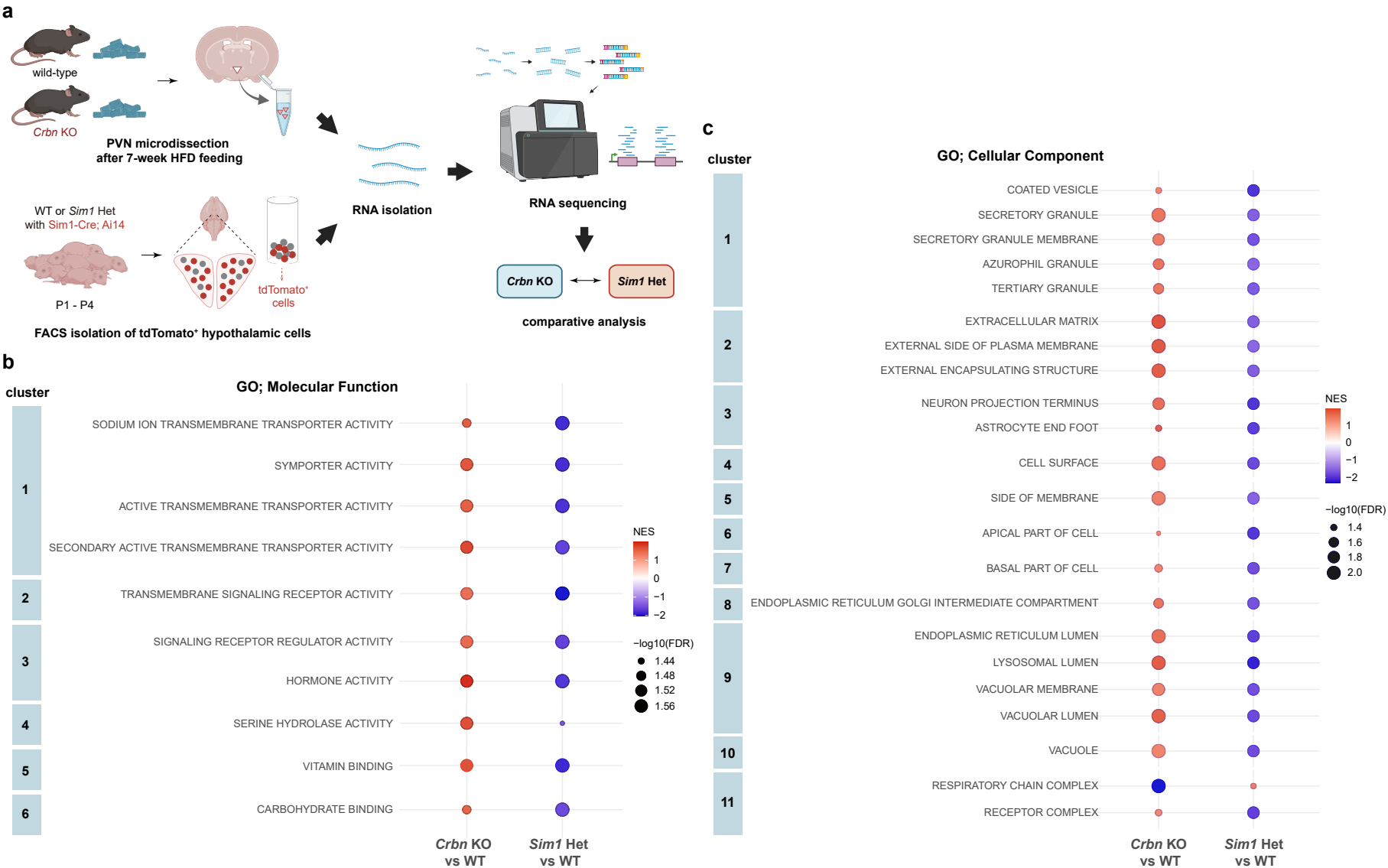


Table S1. Antibodies used in the current study

Antibody	Manufacturer	Catalog number
ARNT2 Rabbit pAb	ABclonal	A8060
CRBN (D8H3S) Rabbit mAb	Cell Signaling Technology	#71810
Anti-CRBN antibody [4D6]	Abcam	Ab244223
β -Actin (C4)	Santa cruz	Sc-47778
Purified mouse anti-GFAP cocktail	BD Pharmingen™	556330
Anti-Iba1/AIF1	Sigma-Aldrich	MABN92
Anti-NeuN	Sigma-Aldrich	MAB377
Lamin A/C	Cell Signaling Technology	#2032
Histone H3 (D2B12) XP® Rabbit mAb (ChIP Formulated)	Cell Signaling Technology	#4620
Normal Rabbit IgG	Cell Signaling Technology	#2729
Ubiquitin (P4D1) Mouse mAb	Cell Signaling Technology	#3936
c-Myc (9E10)	Santa cruz	sc-40
HA-Tag (F-7)	Santa cruz	sc-7392
HA-Tag (C29F4) Rabbit mAb	Cell Signaling Technology	#3724
Monoclonal ANTI-FLAG® M2	SIGMA-ALDRICH	F1804
DYKDDDDK Tag (D6W5B) Rabbit mAb	Cell Signaling Technology	#14793
Anti-GFP	Roche	11 814 460 001
HRP-linked anti-mouse IgG	Cell Signaling Technology	7076
HRP-linked anti-rabbit IgG	Cell Signaling Technology	7074
Goat anti-Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 488	Invitrogen	A-11001
Goat anti-Rabbit IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor™ Plus 647	Invitrogen	A32733
Goat anti-Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody, Alexa Fluor™ 568	Invitrogen	A-11011

Table S2. Oligonucleotides used for mice genotyping

Gene	Sequence (5' - 3')
<i>Crbn</i> WT	
F	CGTTACTTTTCCTGCTCATC
R	CCGCTAAATAACTACCTCCA
<i>Crbn</i> KO	
F	AATTAGCTTCGTCGA
R	TGCAGTTCATTCAGG
<i>Crbn</i> flox	
F	CAGTCAGATGGGTAAGGAGCA
R	AAGCAGCTCCGTAATGCTG
Cre	
Tg 1084	GCGGTCTGGCAGTAAAACTATC
Tg 1085	GTGAAACAGCATTGCTGTCACTT
IPC 7338	CTAGGCCACAGAATTGAAAGATCT
IPC 7339	GTAGGTGGAAATTCTAGCATCATCC
Mc4r-Cre	
wildtype	CAATTCATAACGCCCACT
Mutant	GGCAAACGGACAGAAGCA
Common	TCCGGAGTCAAGAACTGAGG
Lepr-Cre	
Tg F	GCGGTCTGGCAGTAA AACTATC
Tg R	GTGAAACAGCATTGCTGTCACTT
IPC F	CTAGGCCACAGAATTGAAAGATCT
IPC R	GTAGGTGGAAATTCTAGCATCATCC
Crh-Cre	
wildtype	CACGACCAGGCTGCGGCTAAC
Mutant	CAATGTATCTTATCATGTCTGGATCC
Common	CTTACACATTCGTCCTAGCC
Ai14	
Mutant F	GGCATTAAAGCAGCGTATCC
Mutant R	CTGTTCCCTGTACGGCATGG
Wildtype F	AAGGGAGCTGCAGTGGAGTA
Wildtype R	CCGAAAATCTGTGGGAAGTC

Table S3. Oligonucleotides used for real-time qPCR

Gene		Sequence (5' - 3')
<i>Rn18s</i>	F	AGTCCCTGCCCTTTGTACACA
	R	CGTTCCGAGGGCCTCACT
<i>Crbn</i>	F	TACCTGGGAGCTGATATGGAGG
	R	TTCCGCACCATGCTGACTTC
<i>Vegfa</i>	F	CTGCCGTCCGATTGAGACC
	R	CCCCTCCTTGTACCACTGTC
<i>Cidea</i>	F	TGACATTCATGGGATTGCAGAC
	R	GGCCAGTTGTGATGACTAAGAC
<i>Ebf3</i>	F	TCACCCTCCCTTCAAACCTGTA
	R	GTTTCACTGCGGAGATGACAT
<i>Cox8b</i>	F	TGTGGGGATCTCAGCCATAGT
	R	AGTGG CTAAGACCCATCCTG
<i>Dio2</i>	F	AATTATGCCTCGGAGAAGACCG
	R	GGCAGTTGCCTAGTGAAAGGT
<i>Prdm16</i>	F	ACACGCCAGTTCTCCAACCTGT
	R	TGCTTGTTGAGGGAGGAGGTA
<i>Adrb3</i>	F	GGCCCTCTCTAGTTCCCAG
	R	TAGCCATCAAACCTGTTGAGC
<i>Ucp1</i>	F	AGGCTTCCAGTACCATTAGGT
	R	CTGAGTGAGGCAAAGCTGATTT
<i>Elovl3</i>	F	TTCTCACGCGGGTTAAAAATGG
	R	GAGCAACAGATAGACGACCAC
<i>Agrp</i>	F	ATGCTGACTGCAATGTTGCTG
	R	CAGACTTAGACCTGGGAACTCT
<i>Npy</i>	F	ATGCTAGGTAACAAGCGAATGG
	R	TGTCGCAGAGCGGAGTAGTAT
<i>Pomc</i>	F	ATGCCGAGATTCTGCTACAGT
	R	TCCAGCGAGAGGTCGAGTTT
<i>Mc4r</i>	F	CCCGGACGGAGGATGCTAT
	R	TCGCCACGATCACTAGAATGT
<i>Pdyn</i>	F	CTCCTCGTGATGCCCTCTAAT
	R	AGGGAGCAAATCAGGGGGT
<i>Crh</i>	F	CACCTACCAAGGGAGGAGAAG
	R	AGGACGACAGAGCCACCAG
<i>Avp</i>	F	GCCAGGATGCTCAACACTACG
	R	TCTCAGCTCCATGTCAGAGATG
<i>Oxt</i>	F	TTGGCTTACTGGCTCTGACC
	R	GGGAGACACTTGGGCATATC

Table S4. Oligonucleotides used for cDNA cloning

Gene	Sequence (5' - 3')
Mouse <i>Sim1</i>	
F	CGAGACACGATGAAAGAAAAGTCT
R	ACTTCCATTGGTTATTATAACAGATGT
Mouse <i>Arnt2</i>	
F	TTCCCGGCAAGATGGCAA
R	CTCAGAAAATGGAGGGAACATGCC

Table S5. Oligonucleotides used for ChIP PCR

Gene	Sequence (5' - 3')
Human Myom2 (motif 1)	
F	CTGTGCCTCTGATACCCCAG
R	GCTATGCTCCCCAGCTCTAA
Human Myom2 (motif 2)	
F	GATCTTCGCCTCCATCCACC
R	CCAGCTCTAAAACGCATGGA
Human Myom2 (motif 2, 3)	
F	CGAGTGAAGACCTGAGTCGT
R	AGCATTTGTGCCATTTCGCAG