SUPPLEMENTAL FIGURE LEGENDS

Suppl. Fig. 1: PCR analysis of AMPK *α1* and *α2* genes recombination in the VMN.

Schemes of the *α1* (**A**) and *α2* (**B**) genes regions containing the lox sites and structure of the recombined regions. The location of the primers used to identify the alleles before and after cre-mediated recombination is indicated in the schemes (black arrows). (**C**) PCR analysis of the genomic DNA extracted from cortex, lateral hypothalamus and VMN shows specific cre-mediated recombination only in the VMN of *Sf1-cre*;*AMPKα1*$^{lox/lox}$*α2*$^{lox/lox}$ mice.

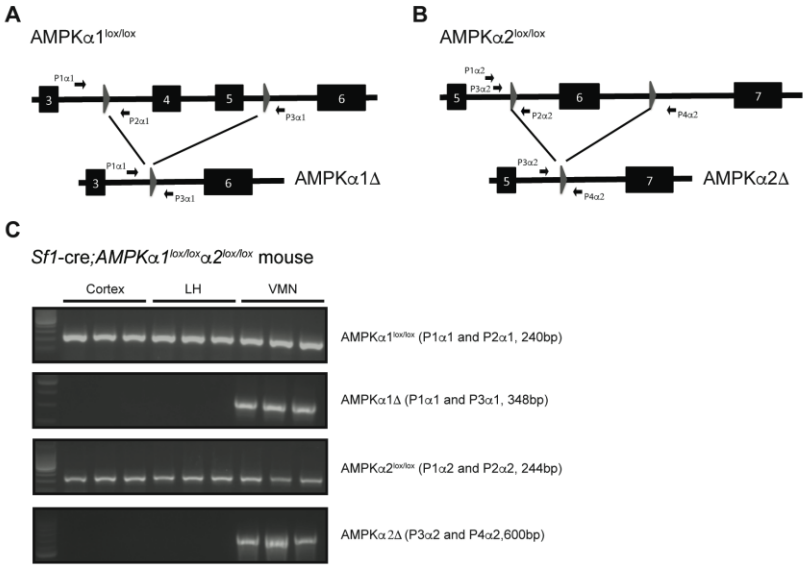
Suppl. Fig. 2: Re-expression of AMPK in *Sf1-cre*;*AMPKα1*$^{lox/lox}$*α2*$^{lox/lox}$ mice allows reappearance of GI neurons.

(**A**) Experimental approach. A lentiviral vector (Lenti-DIO-AMPKα1α2-eGFP) was bilaterally injected in the VMN of *Sf1-cre*;*AMPKα1*$^{lox/lox}$*α2*$^{lox/lox}$ mice. (**B**) Schematic representation of the lentiviral construct. (**C**) Example trace of a GI neuron observed among VMN Sf1 neurons after reexpression of AMPK in *Sf1-cre*;*AMPKα1*$^{lox/lox}$*α2*$^{lox/\mathbf{lox}}$ mice. (**D**) Distribution of GE (n = 3 neurons), GI (n = 3 neurons) and NR (n = 8 neurons) Sf1 neurons of the VMN after AMPK re-expression in *Sf1-cre*;*AMPKα1*$^{lox/lox}$*α2*$^{lox/lox}$ mice.

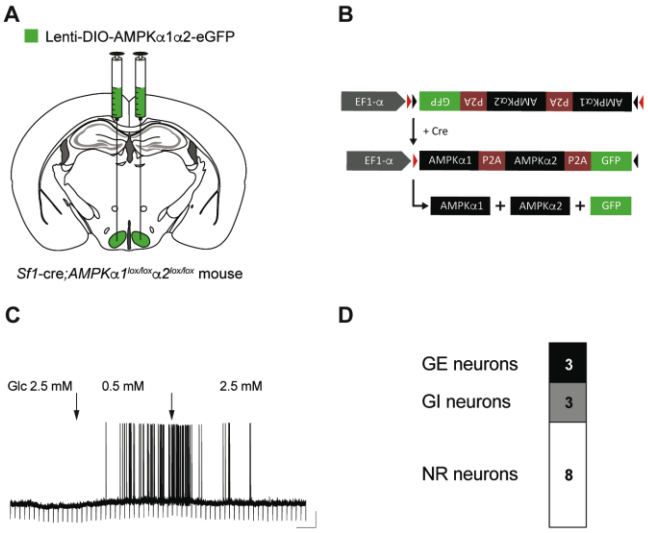
Suppl. Fig. 3: Txn2 expression is controlled by AMPK in Hepa1-6 cells.

Cells were transduced with a control lentivector or a lentivector encoding AMPK-DN or AMPK-CA. The cells were incubated in 0.1mM glucose for 48 hours before RNA and protein extraction. (**A**) Western blot analysis of Txn2, phospho-ACC, total ACC and actin from cells transduced with the mentioned vectors. (**B,D**) Quantitation of the

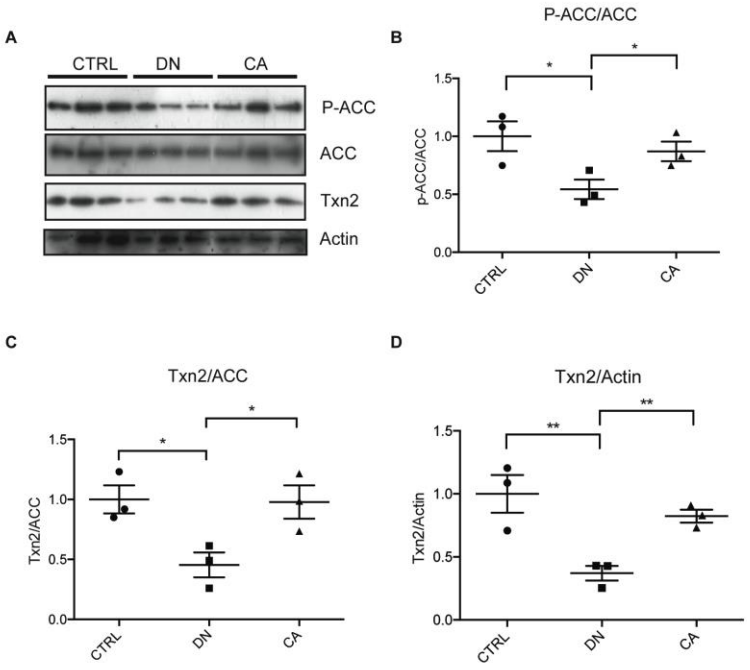
western blots of (**A**). For all panels, Two-tail t test was used. ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; n.s., non-significant.


A
AMPKα1lox/lox
P1α1
P2α1
P3α1
3
4
5
6
AMPKα1Δ
B
AMPKα2lox/lox
P1α2
P3α2
P2α2
P4α2
5
6
7
AMPKα2Δ
C
Sf1-cre;AMPKα1lox/loxα2lox/lox mouse
Cortex
LH
VMN
AMPKα1lox/lox (P1α1 and P2α1, 240bp)
AMPKα1Δ (P1α1 and P3α1, 348bp)
AMPKα2lox/lox (P1α2 and P2α2, 244bp)
AMPKα2Δ (P3α2 and P4α2,600bp)

Suppl. Fig. 1


A
Lenti-DIO-AMPKα1α2-eGFP
Sf1-cre;AMPKα1lox/loxα2lox/lox mouse
B
EF1-α
GFP
P2A
AMPKα2
P2A
AMPKα1
+ Cre
EF1-α
AMPKα1
P2A
AMPKα2
P2A
GFP
AMPKα1 + AMPKα2 + GFP
C
Glc 2.5 mM
0.5 mM
2.5 mM
D
GE neurons
3
GI neurons
3
NR neurons
8

Suppl. Fig. 2


A
CTRL
DN
CA
P-ACC
ACC
Txn2
Actin
B
P-ACC/ACC
p-ACC/ACC
1.5
1.0
0.5
0.0
CTRL
DN
CA
C
Txn2/ACC
Txn2/ACC
D
Txn2/Actin
Txn2/Actin

Suppl. Fig. 3