SUPPLEMENT

Figure Legend

Figure S1

Biochemical parameters in BHcB mice. Blood was collected after a 4h fast from TXNIP-deficient C57BL/6.hcb and control C57BL/6 mice and analyzed for **(A)** triglycerides, **(B)** ketones and **(C)** glucose. Bars represent means ±SEM, *n*=number of mice used per group.

Figure S2

Induction of Akt/Bcl-xL signaling in TXNIP-deficient mice. Pancreata of 12 week-old obese and diabetic BTBR.ob and congenic TXNIP-deficient BTBR.ob/hcb mice were analyzed by immunohistochemistry for **(A)** cleaved caspase-9 and **(B)** Bcl-xL. Isolated islets of C3H and Hcb-19 mice were used for immunoblotting to quantify the expression of **(C)** p-Akt and **(D)** total Akt; bars represent means ±SEM, at least 3 independent experiments were performed; insert: representative immunoblot.

Table S1:

Comparison of Weight and Adiposity in 16-week old TXNIP–deficient HcB-19 (HcB) versus Control C3H Mice

		C3H means ± (SEM) (n=15)	**HcB** means ± (SEM) (n=17)	**p-value*** HcB vs C3H
WEIGHT (g)	**male**	23.8 (0.6)	25.6 (0.5)	**p=0.009**
	female	19.9 (0.5)	21.2 (0.5)	
FAT PAD (g)	**male**	0.31 (0.06)	0.82 (0.05)	**p<0.001**
	female	0.16 (0.06)	0.45 (0.05)	
BODY FAT (%) (DEXA)	**male**	20.3 (0.6)	25.5 (0.6)	**p<0.001**
	female	18.7 (0.6)	23.7 (0.5)	

***** *calculated by 2-way ANOVA*

Table S2:

Effect of TXNIP Deficiency on Weight and Adiposity in 16-week old Mice on a C57BL/6 (B6) Genetic Background

		B6 means ± (SEM) (n=10)	**B6HcB** means ± (SEM) (n=12)	**p-value*** B6HcB vs B6
WEIGHT (g)	**male**	26.8 (0.5)	27.6 (0.6)	**p=0.022**
	female	18.9 (0.6)	20.9 (0.4)	
FAT PAD (g)	**male**	0.30 (0.03)	0.56 (0.04)	**p<0.001**
	female	0.15 (0.04)	0.27 (0.03)	

***** *calculated by 2-way ANOVA*

Table S3:

Serum Insulin and Glucagon

	Insulin (±SEM) (pmol/L)		*p-value*	**Glucagon** (±SEM) (ng/L)		*p-value*
C3H	117	(24)		47.1	(3.6)	
HcB-19	148	(29)	*0.444*	80.1	(8.0)	*0.003*
B6	52	(4)		46.2	(2.7)	
BHcB	68	(11)	*0.221*	49.1	(1.8)	*0.421*
lox/lox	57	(11)		54.3	(11.6)	
bTKO	63	(8)	*0.672*	59.6	(2.1)	*0.749*

Serum insulin and glucagon concentrations were measured after a 4h fast. Numbers represent means (±SEM) of at least 5 mice per group.

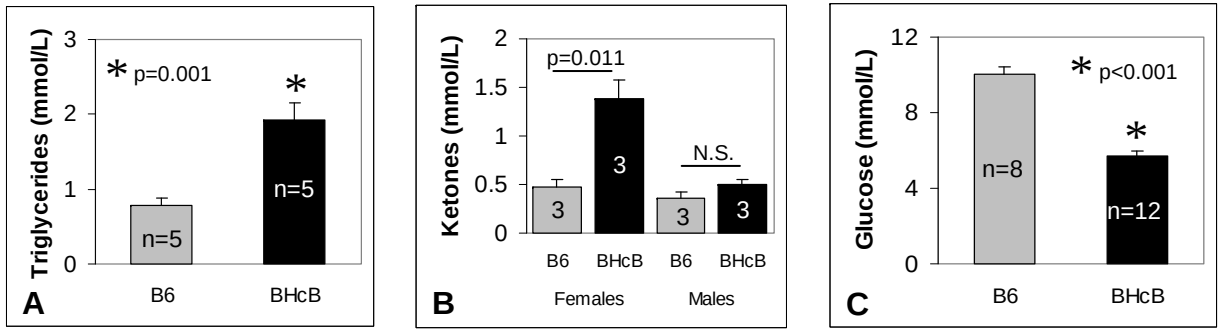
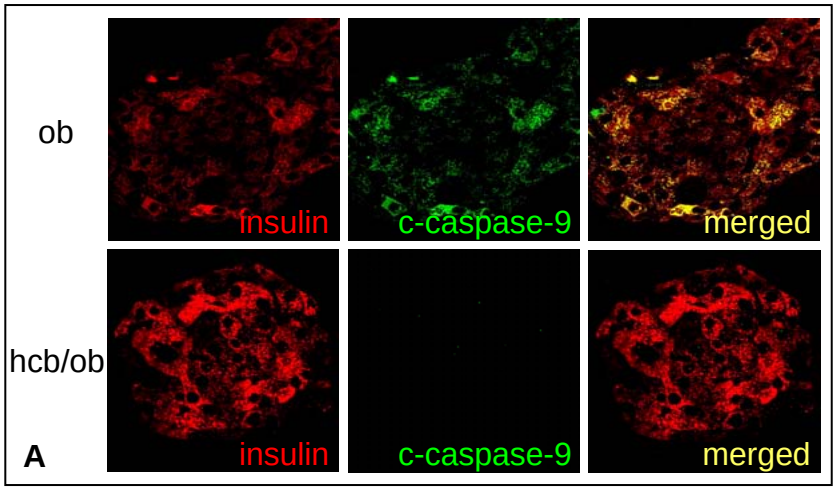
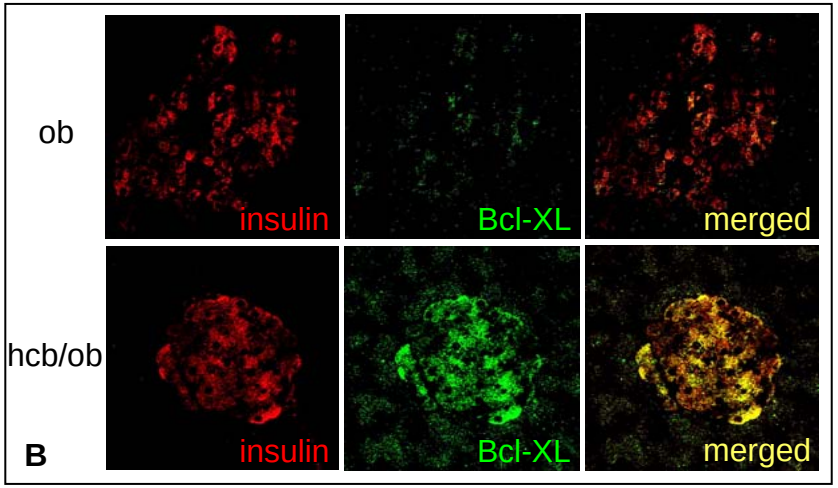
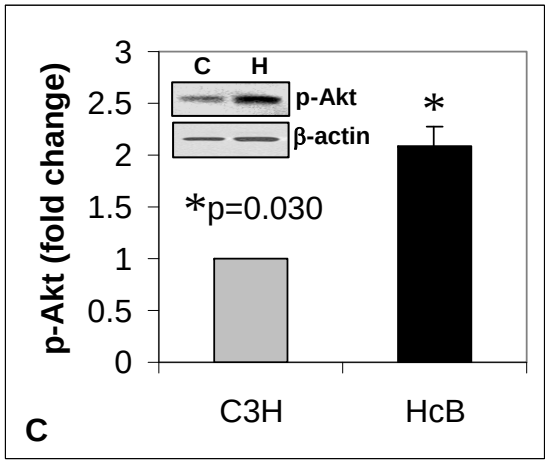

Triglycerides (mmol/L)
3
2
1
0
* p=0.001
*
n=5
n=5
B6
BHcB
A
Ketones (mmol/L)
2
1.5
1
0.5
0
p=0.011
N.S.
3
3
3
3
B6
BHcB
B6
BHcB
Females
Males
B
Glucose (mmol/L)
12
8
4
0
* p<0.001
*
n=8
n=12
B6
BHcB
C

Fig. S1


ob
hcb/ob
insulin
c-caspase-9
merged
A


ob
hcb/ob
insulin
Bcl-XL
merged
B


p-Akt (fold change)
C
H
p-Akt
β-actin
*p=0.030
*
C3H
HcB
C

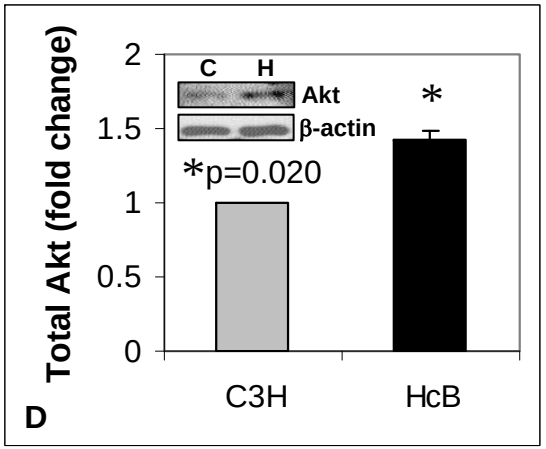

Total Akt (fold change)
C
H
Akt
β-actin
*p=0.020
*
C3H
HcB
D

Fig. S2