Supplementary materials

Table 1 The effects of kCh, DMTU and CC on the HCF1-induced AMPK/PGC-1 activation in C2C12 myotubes

(% control)	HCF1	HCF1 + kCh	HCF1 + DMTU	HCF1 + CC
AMPK activation	$25.8^{*} \pm 2.0$	$-17.5^{\#} \pm 4.9$	$2.8^{\#} \pm 2.0$	- -
PGC-1 nuclear translocation	$25.3^{*} \pm 0.6$	$-0.9^{\#} \pm 8.6$	$-27.5^{\#} \pm 9.1$	$-13.7^{\#} \pm 1.4$
Mitochondrial UCP3 expression	$36.9^{*} \pm 5.0$	$11.5^{\#} \pm 5.5$	$2.1^{\#} \pm 2.4$	$-32.3^{\#} \pm 2.5$
Mitochondrial COX expression	$23.2^{*} \pm 2.1$	$6.3^{\#} \pm 4.3$	$-2.2^{\#} \pm 3.2$	$-5.5^{\#} \pm 1.4$

Data are expressed as percent control with respect to the unpre-incubated control. Values given are means ± SEM, with n = 4.

* Significantly different from the unpre-incubated control; $^{\#}$ significantly different from the HCF1-pre-incubated control

Table 2 The effects of kCh, DMTU and CC on the BSS-induced AMPK/PGC-1 activation in C2C12 myotubes

(% control)	BSS	BSS + kCh	BSS + DMTU	BSS + CC
AMPK activation	25.4* ± 5.4	−5.8# ± 11.7	−15.4# ± 8.9	- -
PGC-1 nuclear translocation	28.1* ± 9.2	−38.8# ± 3.4	−2.7# ± 4.5	−5.1# ± 6.5
Mitochondrial UCP3 expression	52.6* ± 1.6	−23.8# ± 2.5	2.9# ± 1.4	−5.5# ± 5.9
Mitochondrial COX expression	23.5* ± 1.2	1.3# ± 2.1	−1.4# ± 3.2	−12.7# ± 11.1

Data are expressed as percent control with respect to the unpre-incubated control. Values given are means ± SEM, with n = 4.

* Significantly different from the unpre-incubated control; # significantly different from the BSS-pre-incubated control

Table 3 The effect of HCF1 and kCh on HFD-induced obese mice

	ND		HFD			
% ND control	HCF1	kCh	Control	HCF1	kCh	HCF1/kCh
Mitochondrial RCR	68.8* ± 3.6	123.2* ± 11.0	100.8 ± 3.8	75.8*# ± 3.7	99.2 ± 12.8	101.1 ± 5.4
Mitochondrial UCP3	167.4* ± 15.8	99.5 ± 2.9	135.5* ± 2.8	175.5*# ± 5.1	139.8 ± 15.7	119.1 ± 24.2
Body weight (AUC)	90.6* ± 1.2	100.7 ± 2.9	110.6* ± 1.6	100.0*# ± 1.8	115.2* ± 5.6	111.8* ± 3.1
Fat index						
Subcutaneous fat	104.4 ± 28.3	106.4 ± 24.8	386.9* ± 66.9	304.4* ± 35.8	310.4* ± 25.8	313.4* ± 35.8
Visceral fat index	99.8 ± 19.5	116.4 ± 20.1	365.8* ± 63.9	267.8*# ± 52.6	370.8* ± 27.2	361.5* ± 39.1

Data are expressed as percent control with respect to the untreated ND control. Values given are means ± SEM, with n = 10.
*Significantly different from the untreated ND control; #significantly different from the untreated HFD control ($p < 0.05$)