

**Table S1.** The primers sequences used for real time PCR analysis.

Gene	Accession code	Primers	Primer length	Product length	Ct value Hypothalamus	Ct value Anterior pituitary
<i>Ppargc1a</i>	NM_031347	F: 5'-AGCCGTAGGCCAGGTATGACA-3' R: 5'-TGCTTGGCCCTTTCAGACTCCC-3'	22 bp 22 bp	107 bp	24.30	27.25
<i>Ppargc1b</i>	NM_176075	F: 5'-ACCTTCCGGTTCGGAGCATG-3' R: 5'-GTGGAAGGAGGGCTCATTGCGT-3'	22 bp 22 bp	81 bp	26.72	26.83
<i>Ppara</i>	NM_013196	F: 5'-GTCCTGGAAGTGAAGCGACGCT-3' R: 5'-TTACGCCAAATGCACCACGC-3'	22 bp 21 bp	110 bp	29.78	/
<i>Pparb/d</i>	NM_013141	F: 5'-ACGGTAAAGGCGTCCATCTGC-3' R: 5'-TCCTCTGTGGCTTCCATGAC-3'	22 bp 23 bp	109 bp	27.65	24.26
<i>Nrf1</i>	NM_001100708	F: 5'-GACCATCCAGACGACGCAAGCA-3' R: 5'-ATGGCGGCAGCTTCACTGTT-3'	22 bp 21 bp	136 bp	25.94	23.92
<i>Nrf2a (Gabpa)</i>	NM_001108841	F: 5'-AGCGGAAGTGAACCGCTTGGT-3' R: 5'-GTGACTGGCTGAGCAATCCCGT-3'	21 bp 22 bp	84 bp	25.39	23.48
<i>Tfam (mtTFA)</i>	NM_031326	F: 5'-TATAGTCGTCGGCCGAGGGAT-3' R: 5'-AAGGCTGACAGCGAGGTATG-3'	22 bp 22 bp	125 bp	26.26	24.80
<i>Cox4i1</i>	NM_017202	F: 5'-CGCTGAGATGAACAAGGGCACC-3' R: 5'-TCCAGATCAGCACAAGCGCA-3'	22 bp 21 bp	93 bp	21.90	20.08
<i>Cox4i2</i>	NM_053472	F: 5'-CACAGCCCAGGAAGTGCTGCTA-3' R: 5'-TGTGCAGTAAGGCTCATCCGGC-3'	22 bp 22 bp	105 bp	29.23	27.20
<i>Cytc</i>	NM_012839	F: 5'-GCAAGCATAAGACTGGACAAA-3' R: 5'-TTGTTGGCATCTGTGTAAGAGAATC-3'	22 bp 25 bp	88 bp	20.62	20.90
<i>Ucp1</i>	NM_012682	F: 5'-TCAGCTCTTGTGCGCGGTTT-3' R: 5'-TGCACAGCTGGGTACTTGGG-3'	21 bp 22 bp	114 bp	/	/
<i>Ucp2</i>	NM_019354	F: 5'-ACGACCTCCCTTGCCACTTAC-3' R: 5'-GGTACTGGCCAAGGCAGATT-3'	22 bp 22 bp	117 bp	22.61	17.89
<i>Ucp3</i>	NM_013167	F: 5'-TGCTCAACCCACGGATGTGGT-3' R: 5'-CCTGGCGATGTTCTGTAGGCA-3'	21 bp 22 bp	112 bp	/	/
<i>B2m</i>	NM_012512.2	F: 5' GCGTGGGAGGAGCATCAGGG 3' R: 5' CTCATCACCCCGGGGACT 3'	20bp 21bp	264bp	20.30	19.52
<i>mt-Nd1</i>		F: 5' GCGTGGGAGGAGCATCAGGG 3' R: 5' GCGAATGGTCTGCGGCGT A 3'	20bp 20bp	271bp	19.76	19.75
<i>Gapdh</i>	NM_017008	F: 5'-TGCCAAGTATGATGACATCAAGAAG-3 R: 5'-AGCCCAGGATGCCCTTTAGT-3'	25 bp 20 bp	110 bp	18.03	18.35

Primers were design by using software Primer Express 3.0 (Applied Biosystems) and full genes sequences from NCBI 219 Entrez Nucleotide database ([www.ncbi.nlm.nih.gov/sites/entrez](http://www.ncbi.nlm.nih.gov/sites/entrez)).  
F - forward; R - reverse.

**Table S2.** The characteristics of the antibodies used for western blot analysis.

Target	Antigen sequence	Name of Antibody	Manufacturer, catalog #	Mono- or poly-	Dilution used for WB
PGC1	Epitope mapping at amino acids 1-300 mapping near the N-terminus of PGC-1 of human origin	PGC-1 (H300) Peroxisome proliferative activated receptor gamma coactivator 1	Santa Cruz Biotech. Inc sc-13067 MW (PGC1) = 90kDa	Rabbit polyclonal IgG	1:200
NRF1	Epitope mapping amino acids 204-503 mapping at the C-terminus of human origin	NRF-1 (H-300) Nuclear respiratory factor 1	Santa Cruz Biotech. Inc sc-33771 MW (NRF1) = 68 kDa	Rabbit polyclonal IgG	1 : 1000
mtTFA	Amino acids 44-246 of mtTFA of human origin	mtTFA (H-203) Mitochondrial transcription factor 1	Santa Cruz Biotech. Inc sc-28200 MW (mtTFA) = 25 kDa	Rabbit polyclonal IgG	1:100
TFB1M	Epitope mapping within an internal region of TFB1M of human origin	TFB1M (D-13) Transcription factor B1, mitochondrial	Santa Cruz Biotech. Inc sc-169583 MW (TFB1M) = 40 kDa	Goat polyclonal IgG	1:200
COX4	Epitope mapping near the C-terminus of COX4 of mouse origin	COX4 (K20) Cytochrome c oxidase complex IV	Santa Cruz Biotechnology Inc sc-69361 MW (COX4) = 17 kDa	Goat polyclonal IgG	1 : 200
ACTIN	Epitope mapping at the C terminus of ACTIN of human origin	ACTIN (I-19)	Santa Cruz Biotechnology Inc sc-1616 MW (ACTIN) = 43 kDa	Goat polyclonal IgG	1 : 1000