

SOD2 overexpression does not alter mitochondrial gene expression

In the SOD2-overexpressing mice, mitochondrial morphology and gene expression were determined. The mitochondria had a normal ultrastructural appearance in muscle (Suppl. Fig. 1A), liver and heart (not shown). Mitochondrial area was measured by transmission electron microscopy and mitochondrial volume density thus calculated (Suppl. Fig. 1A and B). MtDNA copy number, mitochondrial transcript levels and Tfam, cytochrome *c* and COXII protein levels in skeletal muscle (Suppl. Fig. 1C), liver, brain (not shown) and BAT (Suppl. Fig. 1D, E, and not shown) were quantified and no significant differences in any of these parameters between PAC662D1 and wild-type mice were found. While cold acclimation increased UCP1 protein levels 3-fold (Suppl. Fig. 1D) and PGC-1 α protein levels 2.2 fold (not shown) in BAT, there were no differences between the wild-type and SOD2-overexpressing mice. Thus, while markers of recruitment and mitochondrial biogenesis responded as expected to cold stimulus, the overexpression of SOD2 was without influence on the process.