

Figure 3-figure supplement 1

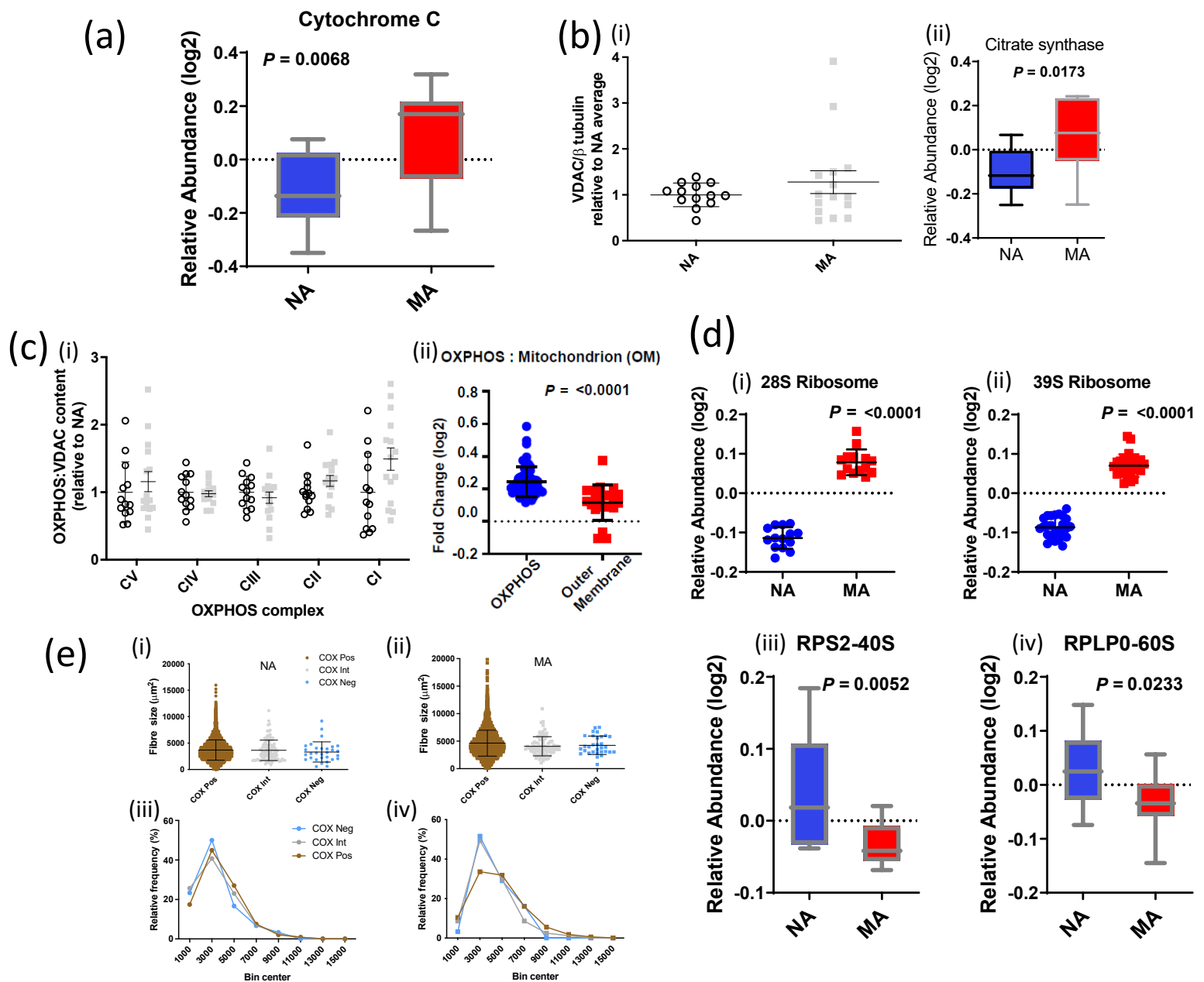


Figure 3-figure supplement1. Abundance of mitochondrial proteins, VDAC and subunits of the OXPHOS chain assessed by western blot and MS in MA versus NA. (a) Higher abundance of cytochrome C in MA. (b) Abundance of mitochondrial proteins. (i) There was no significant difference in VDAC assessed by Western blot between MA ($n=15$) and NA ($n=13$, insufficient tissue from one subject). Removal of the MA outlier made no difference to significance values (Wilcoxon rank-sum). (ii) Citrate synthase protein content by proteomics was higher in MA. (c) (i) There was a significant main effect ($p=0.046$) indicating higher OXPHOS complexes relative to VDAC in MA (grey squares). Western blot values are expressed relative to NA average (empty circles). Graphs show means and standard deviations. (ii) Consistent with these Western blot analyses, Log2 FC expression of 64 significant OXPHOS complex proteins versus 21 VDAC proteins was higher in MA than NA. (d) Ribosomal proteins. Mitochondrial ribosomes are overrepresented in MA and cytoplasmic ribosomes are underrepresented in MA. (i) Twelve 28S ribosomal proteins were averaged and (ii) twenty-four 39S ribosomes are averaged and shown, respectively. (iii) 40S ribosomal protein RPS2 is significantly lower in MA versus NA, and similarly (ii) the abundance of RPLP0 60S protein was higher in MA. (e) Size distribution of respiratory chain compromised fibres: range of observations in (i) NA and (ii) MA, along with the frequency distributions in (iii) NA and (iv) MA. There was no significant difference in the average fibre size between COX^{Pos}, COX^{Int}, or COX^{Neg} cells in either NA or MA subjects and there was no significant increase in the frequency of COX^{Neg} cells in the smallest size bin. Circles are NA and squares are MA, brown symbols are COX^{Pos} fibres, grey symbols are COX^{Int} fibres, blue symbols are COX^{Neg} fibres. Graphs show means and standard deviation.