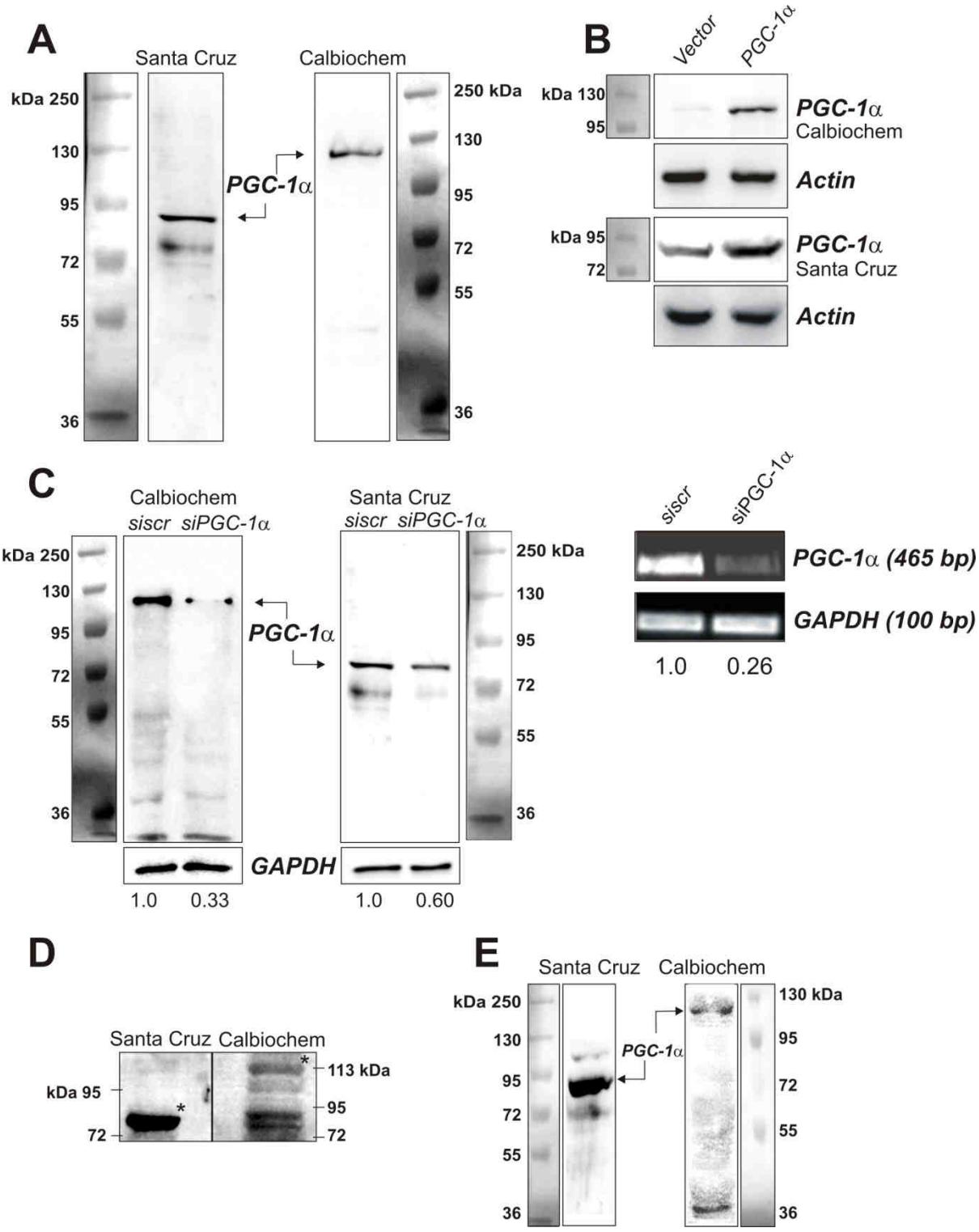
SUPPLEMENTAL FIGURE LEGENDS

SUPPLEMENTAL FIGURE 1. **Validation of the specificity of the antibodies used to identify PGC-1α.** *A,* Total lysates from SH-SY5Y cells were subjected to SDS-PAGE followed by Western blot analysis with polyclonal rabbit PGC-1α antibody (Santa Cruz Biotecnology) or monoclonal mouse PGC-1α antibody (Calbiochem). Arrows evidence the molecular weights of PGC-1α reported in the manufacturer's datasheets. *B,* Mouse PGC-1α was overexpressed in SH-SY5Y cells (PGC-1α) using a pSV-PGC1 vector. After 48 h from transfection, PGC-1α and Actin content was determined by Western blot analysis on total protein extracts with polyclonal rabbit PGC-1α antibody (Santa Cruz Biotecnology) or monoclonal mouse PGC-1α antibody (Calbiochem). *C,* SH-SY5Y cells were transiently transfected with siRNA against PGC-1α (siPGC-1α) or with a scramble siRNA (siscr). After 12h from transfection, PGC-1α and GAPDH content was determined by Western blot analysis on total protein extracts with polyclonal rabbit PGC-1α antibody (Santa Cruz Biotecnology) or monoclonal mouse PGC-1α antibody (Calbiochem). Arrows evidence the molecular weights of PGC-1α reported in the manufacturer's datasheets. PGC-1α and GAPDH mRNA content was determined after 12 by RT-PCR. Density of bands was calculated using the software Quantity one (Bio-Rad) and numerical data represent the ratio of PGC-1α/GAPDH. All the changes reported are statistically significant (*p<0,001). *D,* Total mitochondria lysates from mouse liver were subjected to SDS-PAGE followed by Western blot analysis with polyclonal rabbit PGC-1α antibody (Santa Cruz Biotecnology) or monoclonal mouse PGC-1α antibody (Calbiochem). Asterisks evidence the molecular weights of PGC-1α reported in the manufacturer's datasheets. *E,* Total mitochondria lysates from HeLa cells were subjected to SDS-PAGE followed by Western blot analysis with polyclonal rabbit PGC-1α antibody (Santa Cruz Biotecnology) or monoclonal mouse PGC-1α antibody (Calbiochem). Arrows evidence the molecular weights of PGC-1α reported in the manufacturer's datasheets.

SUPPLEMENTAL FIGURE 2. **Assay of the presence of SIRT1 and PGC-1α in cross-linked mitochondrial nucleoids from mouse liver.** Nucleoids were purified as described under Experimental Procedures. Upper panel: The presence of mtDNA in the fraction containing purified nucleoids (N) was assayed by performing PCR analysis of D-loop region. Bottom panel: After cross-linking reversion, the fraction was subjected to SDS-PAGE. Total mitochondrial lysates from mouse liver (Mito) were loaded in parallel as control. Western blot analysis with mouse anti-cytochrome *c* oxidase subunit IV (COX IV) and mouse anti-cytochrome *c* (Cyt *c*) were carried out to determine the possible presence of protein contaminants. PGC-1α, SIRT1, HSP60, TFAM and SOD2 were detected by using specific rabbit antibodies (Santa Cruz Biotechnology).

SUPPLEMENTAL FIGURE 1



SUPPLEMENTAL FIGURE 2