Supplemental Information

Immunofluorescence

PB and PGC-1α cells were seeded into 12 wells plate, the plate had put the corresponding size glass piece before, adding DMEM medium and placing at 37 °C in 5% CO_2. After 24 h, medium was removed and cells were fixed with 4% methanal for 10 min and washed 2 times with PBS, CyclinB1, and CyclinD1 antibodies (at 1:100 dilution) were incubated for 2 h at 37 °C, and second antibodies (FITC or CY3 labeled, at 1:200 dilution) were incubated for 1 h, respectively. After 2 times with PBS, the cell climbing piece were got out and pasted in glass slide. Immunofluorescence images were photoed with confocal microscopy (Leica, Berlin, Germany) and quantified using ImageJ software.

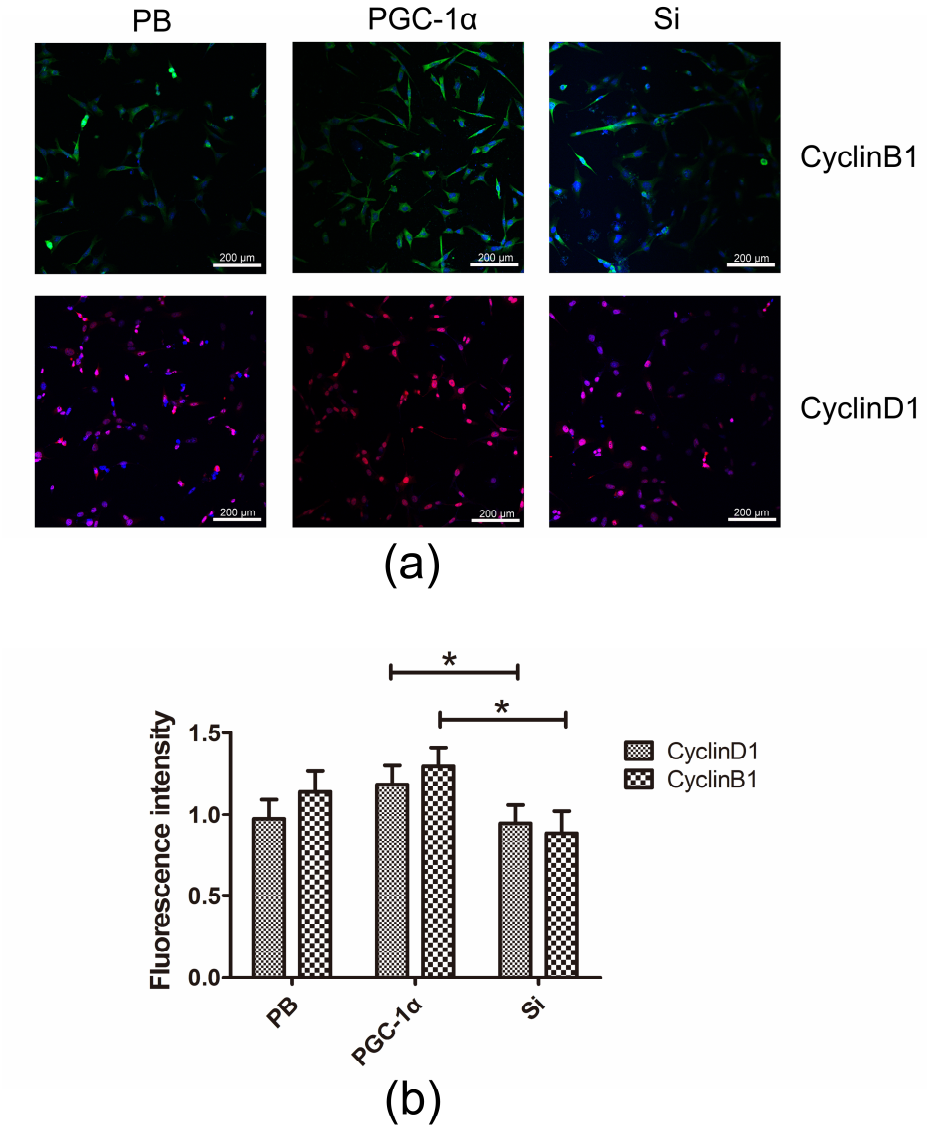

Fig. S1 Immunofluorescence picture of CyclinD1 and CyclinB1 in PB, PGC-1α, and Si cells
(a) The expression of CyclinD1 and CyclinB1 in PB, PGC-1α, and Si cells was detected by immunofluorescence; (b) semi-quantification of CyclinB1 and CyclinD1 proteins expression in (a)

Mitochondrial content measurement

Cells were collected and resuspended in PBS at 1×10^5 cells/ml, and incubated with 100 nmol/L MitoTracker® Green (Invitrogen, Eugene, OR, USA) for 1 h at 37 °C. Untreated cells served as negative controls. Green fluorescence was detected using BD Accuri C6 flow cytometer (BD Biosciences, San Jose, CA) (Corena *et al.*, 2014).

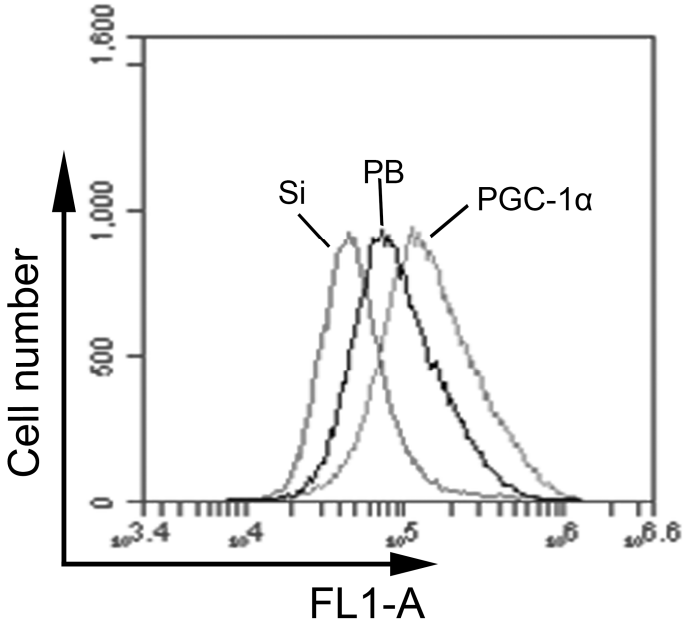

Fig. S2 Mitochondrial content indicated by MitoTracker Green fluorescence (analyzed by flow cytometry).

Treatment by antimycin A

When cells reached 70% confluence, they were incubated with antimycin A (Sigma, St Louis, USA), an inhibitor of electron transport chain complex III. Cells were treated for 24 h at a final concentration of 0.5 mmol/L (Quinzii e*t al.*, 2010). Effects of the treatment on protein expression were determined using Western blot.

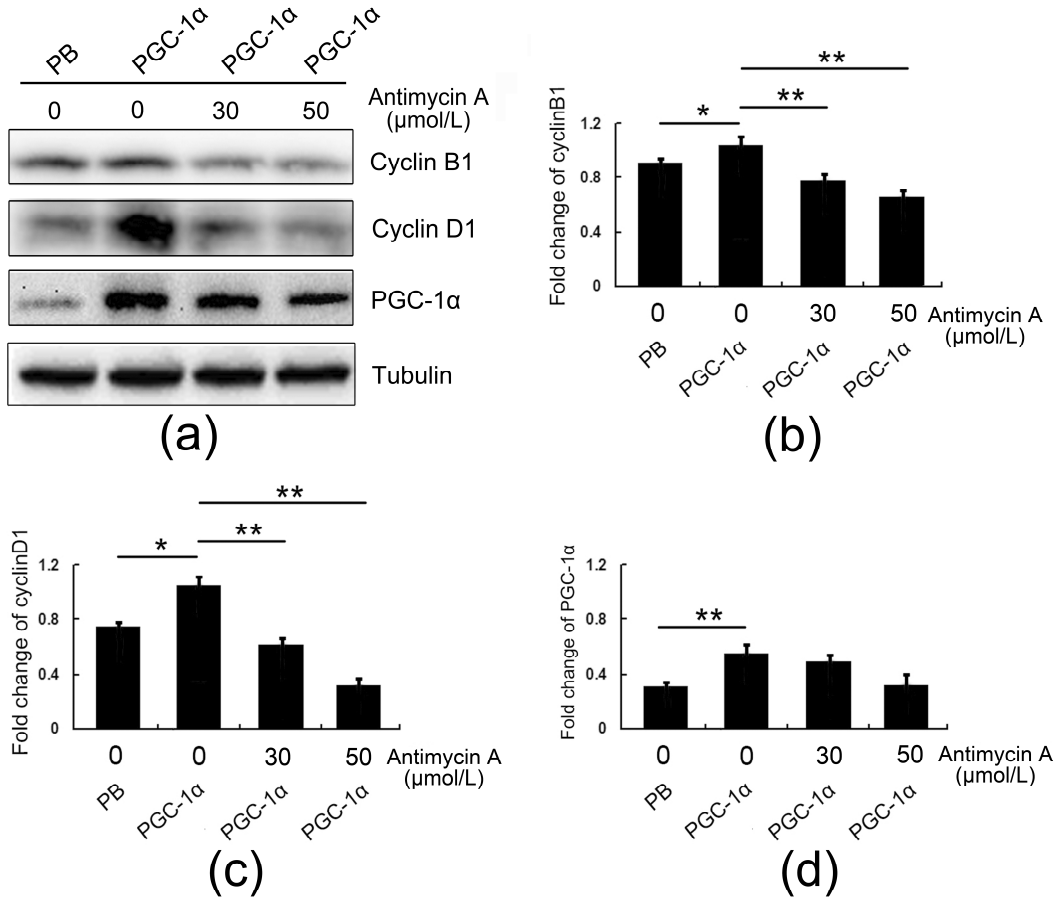

Fig. S3 Change of CyclinD1/B1 levels in CH1-PGC-1α after 24 h of antimycin A treatment

(a) Protein expression of cyclinB1, cyclinD1, and PGC-1α. PGC-1α cells were treated with antimycin A (30 and 50 μmol/L). PB was used as a control for PGC-1α. Semi-quantification of CyclinB1 (b), CyclinD1 (c), and PGC-1α (d) in (a)

Supplemental references

Corena, M.M., Walss, B.C., Oliveros, A., *et al.*, 2013. New model of action for mood stabilizers: phosphoproteome from rat pre-frontal cortex synaptoneurosomal preparations. *PLoS ONE*, **8**(5):e52147. http://dx.doi.org/10.1371/journal.pone.0052147

Quinzii, C.M., López, L.C., Gilkerson, R.W., *et al.*, 2010. Reactive oxygen species, oxidative stress, and cell death correlate with level of CoQ10 deficiency. *FASEB J.*, **24**(10):3733-3743. http://dx.doi.org/10.1096/fj.09-152728