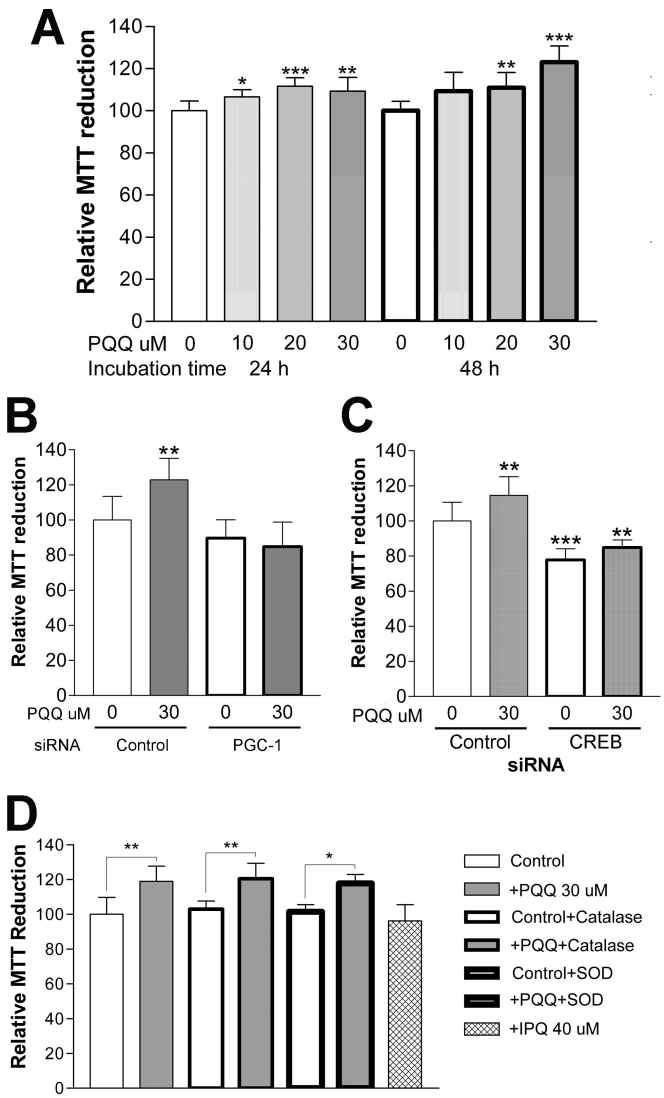
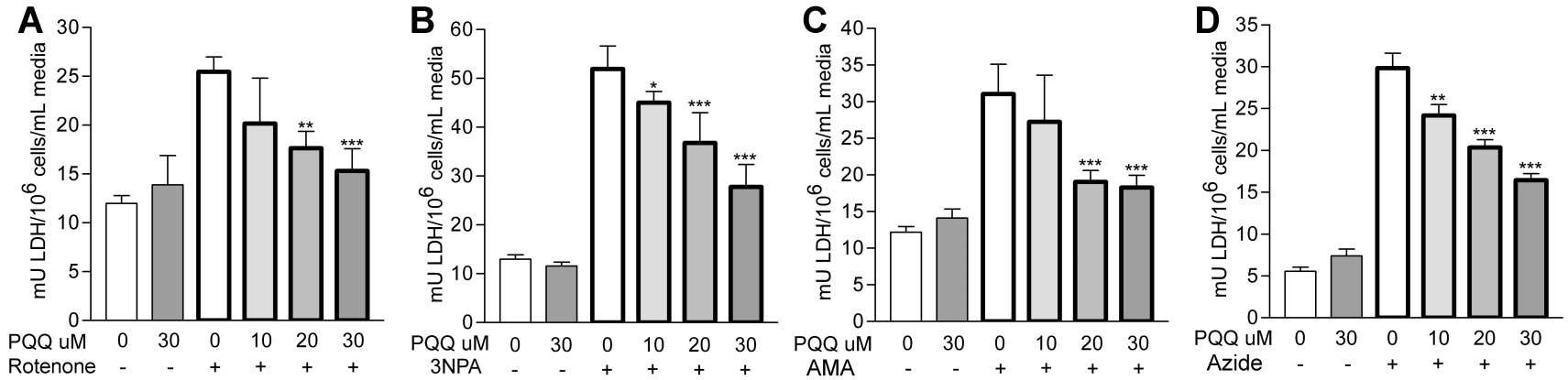


Supplementary Fig. 1 PQQ-mediated induction of succinate dehydrogenase activity is dependant on CREB and PGC-1α and not due to auto-oxidation or imidazopyrroloquinoline (IPQ) addition. Succinate dehydrogenase activity was determined by MTT reduction assay and expressed relative to cell number. MTT reduction was determined in (A) cells exposed to PQQ for 24 or 48 h and expressed relative to control condition (without PQQ at 24 or 48 h), cells transfected with (B) PGC-1α or (C) CREB specific siRNA and then incubated in media supplemented with 30 μM PQQ or control media for 24 h, and (D) cells incubated in either control media or media supplemented with 30 μM PQQ, along with either 20 u catalase/mL media or 20 u superoxide dismutase/mL media, or 40 μM IPQ. Columns and error bars indicate means and standard deviations, respectively. Asterisks denote significant difference of experimental treatment from respective control condition, * $p<0.05$, ** $p<0.01$, *** $p<0.001$.



Supplementary Fig. 2 PQQ prevents cell death due to mitochondrial inhibitors. Cell viability, detected by lactate dehydrogenase (LDH) release, following (A) rotenone, (B) 3-nitropropionic acid (3NPA), (C) antimycin (AMA), or (D) sodium azide (Azide) exposure. Cells were incubated in control media or media supplemented with 10, 20, or 30 μM PQQ for 24 h, followed by exposure to control media or media containing 2 μM rotenone, 40 mM 3-nitropropionic acid, 1 μM antimycin A, or 5 mM sodium azide for 24 h. Columns and error bars indicate means and standard deviations, respectively. Asterisks denote significant difference from control condition, * $p<0.05$, ** $p<0.01$, *** $p<0.001$.