

Supplementary Table S1. Primers used in RT-qPCR

Gene	Primer Sequence (5'-3')	Product Size (bp)
<i>SOX2</i>	Forward TGGACAGTTACGCGCACAT Reverse CGAGTAGGACATGCTGTAGGT	215
<i>REX1</i>	Forward GCCTTATGTGATGGCTATGTGT Reverse ACCCCTTATGACGCATTCTATGT	96
<i>OCT4</i>	Forward CGAGAAGGATGTGGTCCGAG Reverse CAGAGGAAAGGACACTGGTC	136
<i>NANOG</i>	Forward AGATGCCTCACACGGAGACT Reverse GTTTGCCTTTGGGACTGGTG	96
<i>TNNT2</i>	Forward CATGGAGAAGGACCTGAATGA Reverse CGTCTCTCGATCCTGTCTTTG	108
<i>MYH6</i>	Forward CCACCCAAGTTCGACAAGAT Reverse CACAGAAGAGGCCCGAGTAG	127
<i>NKX2-5</i>	Forward CAAGTGTGCGTCTGCCTTT Reverse GCGCACAGCTCTTTCTTTTC	105
<i>DES</i>	Forward CTGAGCAAAGGGGTTCTGAG Reverse ACTTCATGCTGCTGCTGTGT	109
<i>GAPDH</i>	Forward AGTCCCTGCCCACTCAG Reverse TACTTTATTGATGGTACATGACAAGG	123
<i>SCN5A</i>	Forward TCATCGTAGACGTCTCTCTGGT Reverse GGCTCTTGTTGTTACGATGGT	318
<i>CACNA1D</i>	Forward GGGCAATGGGACCTCATAAATAA Reverse TTACCTGGTTGCGAGTGCATTA	141
<i>KCNJ12</i>	Forward GCCAGCTAGGCTCTGTTTGTG Reverse CTGAGACACATCTCTAAGGTAC	152
<i>KCND3</i>	Forward AGAGAGCTGATAAACGCAGGG Reverse CAGGCAGTGCAGCAGGTGAT	209
<i>HCN2</i>	Forward CGCCTGATCCGCTACATCCAT Reverse AGTGCGAAGGAGTACAGTTCCT	230
<i>PPARGC1A</i>	Forward GCAATTGAAGAGCGCCGTGTGA Reverse CTGTCTCCATCATCCCGCAGAT	134
<i>NRF1</i>	Forward AGGCTGGGGGAAAGAAAG Reverse CCAACCTGGATAAGTGAGAC	303
<i>HIF1A</i>	Forward CCAACAGTAACCAACCTCAG Reverse TCCTGTGGTGA CTGTGCCTT	302

Extracellular Flux analysis

Extracellular Flux analysis was done using Seahorse XFp Extracellular Flux analyzer, Cell Mito Stress Test Kit and Cell Energy Phenotype Test Kit (Agilent Technologies, USA). The device simultaneously detects changes in oxygen concentration and in proton concentration (or pH) in the assay medium.

Cell Energy Phenotype Test Kit measures the basal oxygen consumption rate (OCR) and then OCR after the injection of the stressor mix (1 μ M of Oligomycin and 1 μ M of FCCP). Oligomycin inhibits ATP production by the mitochondria and causes a compensatory increase in the rate of glycolysis as the cells attempt to meet their energy demands via the glycolytic pathway. FCCP depolarizes the mitochondrial membrane and drives OCR higher as the mitochondria attempt to restore the mitochondrial membrane potential. The main parameters are as follows:

- Oxygen consumption rate (OCR): The rate of decrease of oxygen concentration in the assay medium. OCR is a measure of the rate of mitochondrial respiration of the cells.
- Extracellular acidification rate (ECAR): The rate of increase in proton concentration (or decrease in pH) in the assay medium. ECAR is a measure of the rate of glycolysis of the cells.
- Baseline phenotype: OCR and ECAR of cells at starting assay conditions.

- Stressed phenotype: OCR and ECAR of cells in the presence of stressor compounds.
- Metabolic potential: Percentage increase of stressed OCR over baseline OCR and stressed ECAR over baseline ECAR. Metabolic potential is the measure of cells' ability to meet the energy demand via respiration and glycolysis.