**Supplementary Material**

1 Supplementary Figures and Tables

1.1 Supplementary Figures

**Supplementary Figure 1.** The substrate–uncoupler–inhibitor titration (SUIT) protocol for simultaneous determination of mitochondrial respiration rate and membrane potential.
Supplementary Figure 2. The Protocol for determination of complex IV enzyme activity by high resolution respirometry.
1.2 Supplementary Tables

| Substances   | weight (mg) | Volume of solvent | Final stock Concentration | Storage (˚C) |
|--------------|-------------|-------------------|---------------------------|--------------|
| Digitonin    | 10          | 1 ml DMSO         | 10 mg/ml                  | -20          |
| Safranin     | 3.5         | 50 ml H₂O         | 200 µM                    | 25           |
| *Pyruvate    | 44          | 0.2 ml H₂O        | 2 M                       | -            |
| *Malate      | 536         | 10 ml H₂O         | 0.4 M                     | -20          |
| *Glutamate   | 3382        | 10 ml H₂O         | 2 M                       | -20          |
| *ADP         | 501         | 2 ml H₂O          | 0.5 M                     | -80          |
| CCCP         | 1.02        | 5 ml DMSO         | 1 mM                      | -20          |
| Rotenone     | 3.94        | 10 ml EtOH        | 1 mM                      | -20          |
| Antimycin A  | 11          | 4 ml EtOH         | 5 mM                      | -20          |

*pH was adjusted to 7.1
*Freshly prepared

**Supplementary Table 1.** Preparation of chemical substances for SUIT protocol
| Chemicals          | Formula weight (g/mol) | Weight or volume                      | Final concentration |
|-------------------|------------------------|---------------------------------------|---------------------|
| EGTA              | 380.4                  | 0.190 g                               | 0.5 mM              |
| MgCl₂.6H₂O        | 203.3                  | 0.610 g                               | 3 mM                |
| Lactobionic acid  | 358.3                  | 120 ml from 0.5 M stock solution      | 60 mM               |
| Taurine           | 125.1                  | 2.502 g                               | 20 mM               |
| KH₂PO₄            | 136.1                  | 1.361 g                               | 10 mM               |
| HEPES             | 238.3                  | 4.77 g                                | 20 mM               |
| D-sucrose         | 342.3                  | 37.65 g                               | 110 mM              |
| BSA               | -                      | 1 g                                   | 1 g/l               |

**Supplementary Table 2.** Preparation 1 L of Mir05 solution. To prepare 1 L Mir05 solution, all the above materials (except lactobionic acid and BSA) were weighted and put in the 1 L of Schott bottle. A total of 800 ml of Milli Q water was added and stirred well using magnetic stirrer at 30°C. Then, a total of 120 ml of lactobionic acid was added and the pH was adjusted to 7.1. The BSA was dissolved separately in a beaker to prevent bubble formation and added slowly into the mixture while stirred soft. The Mir05 solution was aliquoted into 15 mL Falcon tubes and kept at -20 °C until use.
| Substances   | weight (mg) | Volume of solvent | Final stock concentration | storage (˚C) |
|-------------|-------------|-------------------|---------------------------|--------------|
| Digitonin   | 10          | 1 ml DMSO         | 10 mg/ml                  | -20          |
| Rotenone    | 3.94        | 10 ml EtOH        | 1 mM                      | -20          |
| CCCP        | 1.02        | 5 ml DMSO         | 1 mM                      | -20          |
| *#Ascorbate | 1584        | 10 ml H_2O        | 800 mM                    | -20          |
| #TMPD       | 47.4        | 1 ml H_2O         | 200 mM                    | -20          |
| Cytochrome c| 50          | 1 ml H_2O         | 4 mM                      | -20          |
| NaN_3       | 260         | 1 ml H_2O         | 4 M                       | -20          |

*pH was adjusted to 7

Protected from light

**Supplementary Table 3.**  Preparation of substances for complex IV enzyme activity