Figure 4. Schematic representation of the role of ANT1 isoform in muscle cell oxidative phosphorylation. ADP$^3$- and inorganic phosphate (Pi) are transported across the mitochondrial inner membrane (MIM) into the mitochondrial matrix by the mitochondrial ANT and phosphate carrier (PiC), respectively. F1F0 ATPase combines Pi and ADP to form ATP, which is then exchanged for ADP across the MIM by ANT1 then across MOM (mitochondrial outer membrane). The whole reaction is driven by a proton gradient maintained mainly by the respiratory chain. Six of the genes identified from our promotology analysis encode proteins included in the oxidative phosphorylation (respiratory chain and F0-F1 ATP synthase proteins).