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| **Table 1: Parameters of the model. Our model simulates reactions occuring at T = 37℃. To convert the experimentally measured rates, determined at T = 25℃, the temperature coefficient *Q*10 = 2 was used.** | | |
| Parameter | Value | Reference |
| **MiCK**  *Vf* (PCr production)  *Vb* (ATP production)  *Kia*  *Kb*  *Kic*  *Kd*  *Kib*  *Kid*  *Kc*  *KIb*  **MMCK**  *Vf* (PCr production)  *Vb* (ATP production)  *Kia*  *Kb*  *Kic*  *Kd*  *Kib*  *Kid*  *Kc*  *KIb*  **ATP synthesis**  *Vsynmax*  *KADP*  *KPi*  **ATP hydrolysis**  *Vhyd*  **Permeabilities**  *RATP*  *RADP*  *RPCr*  *RCr*  *RPi*  **Fractional volumes**  *Vcyt*  *Vims*  **Total contents**  *AdNtot*  *Crtot*  *Pitot* | 2.658·103 *µ*M/s  1.116·104 *µ*M/s  7.5·102 *µ*M  5.2·103 *µ*M  2.048·102 *µ*M  5.0·102 *µ*M  2.88·104 *µ*M  1.6·103 *µ*M  *Kic Kd* /*Kid*  *Kib*  6.966·103 *µ*M/s  2.925·104 *µ*M/s  9.0·102 *µ*M  1.55·104 *µ*M  2.224·102 *µ*M  1.67·103 *µ*M  3.49·104 *µ*M  4.73·103 *µ*M  *Kic Kd* /*Kid*  *Kib*  4.6·103 *µ*M/s  8.0·102 *µ*M  20.0·104 *µ*M  4.6·103 *µ*M/s  8.16 s-1  8.16 s-1  14.6 s-1  14.6 s-1  18.4 s-1  3/4  1/16  9.7·103 *µ*M  2.6·104 *µ*M  3.2·104 *µ*M | [1]a  [12]b  [1]  ”  ”  ”  ”  ”  ”  ”  [16]c  ”c  [1]  ”  ”  ”  ”  ”  ”  ”  [26]d  [21]  [3]  -  -e  -  -  -  -  [20]f  ”  -  -  - |
| a Vb/Vf = 4.199, according to [1]  b 3.0 IU / mg mito prot at T = 25℃.  c Calculated from MiCK activity which is about 15% of total CK activity in heart [16].  d Corresponds to 120µmol/(gdw·min) of O2 consumption at T = 37℃.  e Ratios of the permeabilities are the same as ratios of the diffusion coefficients of these metabolites in muscle [14].  f Total volume 1 corresponds to 0.615mL/gww. | | |