

Table S4. Constant parameter values used in model simulations.

Parameters	values
T	308 K
F	96485 C mol ⁻¹
R	8.314 J K ⁻¹ mol ⁻¹
z_{Na}	1
z_K	1
z_{Ca}	2
$[Na^+]_i$	4 mM
$[Na^+]_o$	130 mM
$[K^+]_i$	140 mM
$[K^+]_o$	6 mM
$[Cl^-]_i$	46 mM
$[Cl^-]_o$	130 mM
$[Ca^{2+}]_o$	2.5 mM
$[Mg^{2+}]_o$	0.5 mM
C_m	1 μ F cm ⁻²
A_c/V_c	4 cm ⁻¹
β	0.015
\bar{J}_{PMCA}	3.5e ⁻⁷ mM ms ⁻¹
$K_{m,PMCA}$	0.5 μ M
n_{PMCA}	2
\bar{J}_{NaCa}	3.5e ⁻⁶ mM ms ⁻¹
$K_{m,Allo}$	3 μ M
n_{Allo}	4
k_{sat}	0.27
γ	0.35
$K_{m,Nai}$	30.0 mM
$K_{m,Cai}$	7 μ M
$K_{m,Nao}$	87.5 mM
$K_{m,Cao}$	1.3 mM
\bar{g}_{CaL}	0.6 nS pF ⁻¹
E_{CaL}	45 mV
$K_{m,CaL}$	1 μ M
\bar{g}_{CaT}	0.058 nS pF ⁻¹
E_{CaT}	42 mV
\bar{g}_{Na}	0 – 0.12 nS pF ⁻¹
\bar{g}_h	0.0542 nS pF ⁻¹
\bar{g}_K	0.8 nS pF ⁻¹
\bar{g}_b	0.004 nS pF ⁻¹
\bar{g}_{K1}	0.65 \bar{g}_K
\bar{g}_{K2}	0.04 \bar{g}_K
\bar{g}_{Ka}	0.2 \bar{g}_K
\bar{g}_{BK}	\bar{g}_K
p_a	0.2
p_b	0.1
\bar{g}_L	0 nS pF ⁻¹

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Parameters	values
\bar{g}_{NS}	0.0123 nS pF ⁻¹
$P_{\text{Na}}/P_{\text{K}}$	0.35
$P_{\text{Ca}} : P_{\text{Cs}}$	0.89
$P_{\text{Na}} : P_{\text{Cs}}$	0.9
$P_{\text{K}} : P_{\text{Cs}}$	1.3
$K_{d,\text{Mg}}$	0.28 mM
\bar{g}_{Cl}	0.1875 nS pF ⁻¹
\bar{g}_{NaK}	1.7 nS pF ⁻¹
$K_{d,\text{K}}$	2.0 mM
n_{K}	1.5
$K_{m,\text{Na}}$	22.0 mM
n_{Na}	2