

TABLE II. Parameter values of the model MSO neuron in each compartment. (n/a is non-applicable.)

Parameter (unit)	Dendrites (2)	Soma	Axon
Temperature ($^{\circ}\text{C}$)	37	37	37
Number of segments, nseg	20	2	51
Diameter (μm)	3.5	20	2
Length (μm)	150	40	400
Resistivity, R_a ($\text{ohm} \times \text{cm}$)	150	150	150
C_M ($\mu\text{F}/\text{cm}^2$)	1	1	1
E_K (mV)	-106	-106	-106
E_{Na} (mV)	n/a	62.1	62.1
E_h (mV)	-43	-43	-43
E_{PAS} (mV)	-60	n/a	n/a
E_{LeakNa} (mV)	n/a	-60	-65
G_{maxKLT} (S/cm^2)	0.0022	0.054	0.0595
G_{maxNa} (S/cm^2)	n/a	0.072	0.25
$G_{\text{max}h}$ (S/cm^2)	0.0011	0.0216	0.0025
G_{PAS} (S/cm^2)	0.00005	n/a	n/a
G_{LeakNa} (S/cm^2)	n/a	0.0004	0.00005
E_E (mV)	0	n/a	n/a
ζ_E (nS)	18-220	n/a	n/a
$\tau_{E_{\text{rise}}}$ (ms)	0.39996	n/a	n/a
$\tau_{E_{\text{decay}}}$ (ms)	0.4	n/a	n/a
E_I (mV)	n/a	-90	n/a
ζ_I (nS)	n/a	30-72, 3-8	n/a
$\tau_{I_{\text{rise}}}$ (ms)	n/a	0.39996, 0.4	n/a
$\tau_{I_{\text{decay}}}$ (ms)	n/a	0.4, 2.0	n/a
$V_{\text{AP-THRESH}}$ (mV, set)	n/a	n/a	-20
V_{REST} (mV, measured)	-60.3	-60.3	-64.3
τ_M (ms, calculated at V_{REST})	0.36	0.29	0.79