**Supplementary File 1: Table of variables**

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| **#** | **Short name** | **Units** | **Average value in naïve set** | **N** | **Brief description** (See "Methods" for a detailed description) |
| 1 | Cm | pF | 14.8 ± 3.6 | 154 | Cell membrane capacitance |
| 2 | Rm | GΩ | 1.2 ± 0.6 | 153 | Cell membrane resistance |
| 3 | Ra | MΩ | 53.9 ± 23.1 | 153 | Access resistance |
| 4 | I hold | pA | 15.8 ± 13.4 | 151 | Current required to voltage-clamp the cell at −65 mV |
| 5 | Na activation | mV | −20.3 ± 6.2 | 154 | Lowest potential that triggered voltage-gated Na current |
| 6 | INa | pA | 434 ± 226 | 154 | Maximal voltage-gated Na current |
| 7 | KS activation | mV | −19.0 ± 6.4 | 154 | Lowest potential to trigger slow voltage-gated K current |
| 8 | IKS | pA | 537 ± 259 | 154 | Maximal voltage-gated slow K current |
| 9 | KT activation | mV | −15.6 ±11.7 | 154 | Lowest potential to trigger transient voltage-gated K current |
| 10 | IKT | pA | 171 ± 98 | 154 | Maximal voltage-gated transient K current |
| 11 | Tail | ms | 41 ± 16 | 135 | Time constant of cell repolarization after step injection (the prominence of a tail potential after step injection) |
| 12 | Spike threshold | mV | −25.0 ± 7.6 | 134 | The potential of a "kink point", at which neuron switched from passive to "explosive" response to current injection. |
| 13 | Spike amplitude | mV | 19.9 ± 10.2 | 134 | Spike amplitude in current clamp mode |
| 14 | Spike rise-time | ms | 1.5 ± 1.0 | 134 | Spike rise time in current clamp mode |
| 15 | Spike width | ms | 4.0 ± 2.4 | 134 | Spike width |
| 16 | I best | pA | 122 ± 52 | 134 | Steady current injection that produced highest spiking |
| 17 | N spikes, step | n | 4.5 ± 3.1 | 134 | Max. number of spikes produced on step injection |
| 18 | Spike ISI | ms | 13.9 ± 6.0 | 117 | Inter-spike interval for best step injection |
| 19 | Spike ISI accomm | - | 1.1 ± 0.2 | 90 | Ratio of 2nd and 2st inter-spike intervals |
| 20 | Spike accomm. | - | 2.3 ± 1.3 | 117 | Spike amplitude accommodation. |
| 21 | N spikes, cosine | n | 0.7 ± 0.4 | 108 | Max. number of spikes produced on cosine injection |
| 22 | Spiking resonance | ms | 43 ± 10 | 108 | Cosine injection period that produced highest spiking |
| 23 | Spiking resonance width | pA | 53 ± 52 | 108 | A measure of non-saturation of spike output in response to slower cosine injections (a measure of non-inactivation) |
| 24 | Wave buildup | n | 9.7 ± 5.8 | 108 | Cosine "bump" by which the cell reached highest spiking |
| 25 | Wave decay | n | 35 ± 64 | 108 | A measure of spiking inactivation: decay constant for spiking in response to consecutive cosine "bumps" |
| 26 | Jitter | - | 0.1 ± 0.1 | 108 | Spike-timing jitter coefficient during cosine injections |
| 27 | Synaptic resonance | ms | 52.5 ± 76.3 | 76 | Inter-stimulus interval that evoked maximal total synaptic response (total charge) |
| 28 | Synaptic resonance width | ms | 90 ± 85 | 76 | Sharpness of non-linear summation as a function of inter-stimulus interval (high value = low dependency) |
| 29 | Synaptic charge | nA·s | 16.8 ± 18.0 | 76 | Maximal total synaptic charge |
| 30 | Synaptic PPF | - | 2.4 ± 1.5 | 76 | A measure of synaptic non-linear summation |
| 31 | Monosynapticity | - | 3.1 ± 2.8 | 76 | Ratio of monosynaptic to polysynaptic responses |
| 32 | Minis frequency | Hz | 4.8 ± 4.4 | 64 | Frequency of spontaneous excitatory postsynaptic currents |
| 33 | Minis amplitude | pA | 5.0 ± 2.1 | 64 | Mean amplitude of excitatory postsynaptic currents |