**S1 Table. Parameters of hidden Markov models used in the A549 whole-cell current model.** Rate constants for transitions between the states of all hidden Markov models. For calcium dependent transitions the calculated steady state calcium concentration *Ca\_i* = 4.68 µM is used.

|  |  |
| --- | --- |
| **Kv1.3 kinetic model** [1] | **TASK-1 kinetic model** [2] |
|  ms-1 |  ms-1 |  ms-1 |  ms-1 |
|  ms-1 | ms-1 |  ms-1 |  ms-1 |
|  ms-1 |  ms-1 | **KCa1.1 kinetic model** [3] |
| **Kv3.1 kinetic model** [4] |  ms-1 |  ms-1 |
|  ms-1 |  ms-1 |  ms-1 |  ms-1 |
|  ms-1 | ms-1 |  ms-1 |  ms-1 |
| **Kv3.4 kinetic model** [5] |  ms-1 |  ms-1 |
|  ms-1 |  ms-1 |  ms-1 |  ms-1 |
|  ms-1 |  ms-1 | *d* = 200 mV  | *b* = 36 mV |
|  ms-1 |  ms-1 | *kc*= 13.5 *Ca\_rate* ms-1 | *ko* = 1.5*Ca\_rate* ms-1 |
| **Kv7.1 kinetic model** [6] | *Ca* = *Ca\_i* *Ca\_rate* ms-1 | *Ca\_rate* = 1 µM-1ms-1 |
|  ms-1 |  ms-1 | **KCa3.1 kinetic model** [7] |
|  ms-1 |  ms-1 |  ms-1 | ms-1 |
|  ms-1 |  ms-1 |  ms-1 |  ms-1 |
|  ms-1 |  ms-1 |  ms-1 | *Ca\_i* = 4.68 µM |
| **CLC-2 kinetic model** [8] | *b* = 20 ms-1 |
|  ms-1 |  ms-1 | **CRACM1 kinetic model** [9] |
|  ms-1 | s-1 |  ms-1 |  ms-1 |
| s-1 |  ms-1 |

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