# Table S3

Table S3: Biochemical rate constants, diffusion constants and initial concentrations used for the Ca2+ simulations investigating the effects of calmodulin (CaM) and ATP buffering and Ca2+ dependent RyR gating. Parameters were obtained from [16,26,55,56]

|  |  |
| --- | --- |
| Total [CaM] | 24 μM |
| KD Ca-CaM | 0.38 μM |
| [CaMCa] initial | 0.471 μM |
| [CaM] initial | 23.52 μM |
| CaM kioff | 0.038 /ms |
| CaM kion | 0.1 /μMms |
| CaM Dcyto | 0.025 μm2/ms |
| Total [ATP] | 455 μM |
| KD Ca-ATP | 0.38 μM |
| [ATPCa]0 | 0.318 μM |
| [ATP]0 | 454.682 μM |
| ATP kioff | 45 /ms |
| ATP kion | 0.255 /μMms |
| ATP Dcyto | 0.14 μm2/ms |
| Total [CSQ] | 10000 μM |
| KD Ca- CSQ | 800 μM |
| [Ca- CSQ]0 | 5555.5555 μM |
| [CSQ]0 | 4444.4445 μM |
| [CaNSR]0 | 1000 μM |
| [CaJSR]0 | 1000 μM |
| [Cadyad]0 | 0.1 μM |
| gryr  | 0.02 per ms |
| grefill | 0.01 per ms |
| gcyto | 40.0 per ms |
| NumRyR (per cluster) | 50 |