

Table EV1. Model Parameters

Parameter	Meaning	Value for Center of Prior	Reference
$K_{on,ATP} (s^{-1})$	Rate constant for PLC generation through ligand binding	1	N/A
$K_{ATP} (s^{-1})$	Exponential decay constant	8.3e-3	N/A
$K_{off,PLC} (s^{-1})$	Degradation constant for PLC	1.25	N/A
$V_{PLC} (\mu M/s^{-1})$	Maximum velocity for IP3 generation	1	N/A
$K_{IP3} (\mu M)$	Equilibrium constant for IP3 generation through PLC	0.5	N/A
$K_{off,IP3} (s^{-1})$	Degradation rate constant of IP3	1.25	N/A
$a (s^{-1})$	Time constant of IP3 channel	1	Li
$d_{inh} (\mu M)$	Dissociation constant for IP3 channel calcium inhibiting subunit	0.4	Li
$d1 (\mu M)$	Dissociation constant for IP3 channel IP3 activating subunit	0.13	Lemon
$d5(\mu M)$	Dissociation constant For IP3 channel calcium activating subunit	0.0823	Lemon
$B_e (\mu M)$	Concentration of calcium buffer	150	Lemon
$K_e (\mu M)$	Dissociation constant for calcium buffer	10	Lemon
$k3 (\mu M)$	SERCA pump dissociation constant	0.4	Lemon
$\eta_1 (s^{-1})$	IP3 channel permeability constant	575	Lemon
$\eta_2 (s^{-1})$	ER leak permeability constant	5.2	Lemon
$\eta_3 (s^{-1})$	Effective calcium pump permeability	45	Lemon
$c_0 (\mu M)$	Total calcium concentration	2	Lemon