

Table 5. Parameters used in the template simulations

Par	Definition	Value	Ref
pK	equilibrium constant for auxin variants	4.7	(1),(2)
pH^{cell}	pH in the cellular compartments	7.2	(1)
pH^{wall}	pH in wall compartments	5.0	(1),(2)
$f_{\text{AH}}^{\text{cell}}$	fraction AH/A in cells	0.003	(1)
$f_{\text{AH}}^{\text{wall}}$	fraction AH/A in walls	0.334	(1)
$f_{\text{A}^-}^{\text{cell}}$	fraction A^-/A in cells	0.997	(1)
$f_{\text{A}^-}^{\text{wall}}$	fraction A^-/A in walls	0.666	(1)
p_{AH}	membrane permeability AH	$3.3 \times 10^1 \mu\text{ms}^{-1}$	(1)
p_{A^-}	membrane permeability A^-	$1.24 \times 10^1 \mu\text{ms}^{-1}$	(1)
V	membrane potential	-100 mV	(1)
N_{influx}	Electrochemical factor for influx	0.07	(1)
N_{efflux}	Electrochemical factor for efflux	4.0	(1)
K_{A}	Half max Michaelis-Menten constant	$1.0 \mu\text{M}$	(2)
D_{A}	Auxin diffusion (in walls)	$7 \times 10^2 \mu\text{m}^2\text{s}^{-1}$	(1)
c_{A}	Auxin production / boundary influx	$0.1 \mu\text{M}\text{s}^{-1}$	
d_{A}	Auxin degradation / boundary efflux	0.1s^{-1}	
k_1	Maximal PIN1 membrane localization rate	1.0s^{-1}	optimized
k_2	PIN1 internalization rate	0.4s^{-1}	optimized
n	Hill coefficient for PIN1 membranalization	3.0	optimized
K	Hill half max constant for PIN1 membranalization	$0.4 \mu\text{M}$	optimized

Most of the parameters are taken from (1-3) and are further discussed in the text. In the ref column we only cite if exact the same value is used, but in most cases similar values are used.

1. Goldsmith, M. H., Goldsmith, T. H. & Martin, M. H. (1981) *Proc. Natl. Acad. Sci. USA.* **78**, 976-980.
2. Mitchison, G. J. (1980) *Proc. R. Soc. London Ser. B* **209**, 489-511.
3. Kramer, E. M. (2004) *Tr. Plant Sci.* **9**, 578-582.