**Table S2. Overview of kinetic parameters of *Model 12.***

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Value [Units]** | **Explanation** |
| D[0] | 900 [µm2/min] | Auxin diffusion constant |
| D[1] | 12 [µm2/min] | Cytokinin diffusion constant |
| apoplast\_thickness | 1 [µm] | Apoplast thickness |
| k\_import | 60 [µm/min] | Auxin import permeability |
| k\_export | 2000 [µm/min] | Auxin export permeability |
| km\_shy | 0.1 [AU\*] | Shy2-dependent auxin export inhibition constant |
| aux\_production | 1 [AU/min] | Cellular auxin production rate constant |
| aux\_breakdown | 1.5e-3 [1/min] | Cellular auxin breakdown rate constant |
| aux\_source | 1e5 [1/min] | Rate constant for incoming auxin flux  |
| aux\_sink | 1e5 [1/min] | Rate constant for outgoing auxin flux |
| ck\_source | 25 [1/min] | Rate constant for incoming cytokinin flux  |
| ck\_sink | 25 [1/min] | Rate constant for outgoing cytokinin flux |
| vm\_aux\_ck | 0.01 [AU/min] | Auxin-dependent cytokinin production rate constant |
| km\_aux\_ck | 100 [AU] | Auxin-dependent cytokinin inhibition constant |
| ck\_breakdown | 5e-4 [1/min] | Cellular cytokinin breakdown rate constant |
| shy2\_production | 1 [AU/min] | Cellular shy2 production rate constant |
| shy2\_breakdown | 1e-3 [1/min] | Cellular shy2 breakdown rate constant |
| aux\_shy2\_breakdown | 0.1 [1/min] | Auxin-dependent shy2 breakdown rate constant |
| km\_aux\_shy2 | 100 [AU] | S0.5 for auxin-dependent shy2 breakdown  |
| ga\_production | 100 [1/min] | Cellular gibberellin production rate constant |
| ga\_breakdown | 0.1 [1/min] | Cellular gibberellin breakdown rate constant |

\* ‘AU’: Arbitrary concentration Units