

**Table S5,** Range of parameter values explored in Monte Carlo simulation approach. This parameter range was explored for the model of regulation by parallel activation (model configuration *ii*).

Parameter name	Parameter range	Unit
$X_A$	0 -10	Unitless
$X_{IA}$	0 – 1	Unitless
$nH$	1 – 4	Unitless
$K_{50AtC}$	0 – 0.1	mmol (L cell water) <sup>-1</sup> s <sup>-1</sup>
$K_{on}$	0 – 1	s <sup>-1</sup>
$K'_{off}$	0 – 1000	s <sup>-1</sup>