Table S10. Initial condition set

Variable	Value
V_0	1.1350
$[\mathrm{Cln3}]_0$	0.3115 (54)
$[\mathrm{Bck2}]_0$	0.1283 (40)
$[\mathrm{WHI5dep}]_0$	1.3762 (575)
$[\mathrm{SBFdep}]_0$	0.4945 (206)
$[\mathrm{Cln2}]_0$	0.1237 (199)
$[\mathrm{CKI}_T]_0$	0.1596 (311)
$[\mathrm{CKI}_P]_0$	0 (0)
$[\mathrm{Clb5}_T]_0$	0.1848 (360)
$[\mathrm{Clb2}_T]_0$	0.1666 (325)
$[\mathrm{BUD}]_0$	0.0305
$[\mathrm{ORI}]_0$	0.0104
$[\mathrm{SPN}]_0$	0.0404
$[\mathrm{Swi5}_T]_0$	0.6532 (630)
$[\mathrm{CDC20}_T]_0$	1.3909 (2478)
$[\mathrm{Mad2}_A]_0$	0.4497 (801)
$[\mathrm{APCP}]_0$	0.1627 (289)
$[\mathrm{Cdh1}_A]_0$	0.9370 (1066)
$[\mathrm{Net1dep}]_0$	0.1785 (69)
$[\mathrm{PPX}]_0$	0.0117 (18)
$[\mathrm{Pds1}_T]_0$	0.0252 (1)
$[\mathrm{Cdc15}]_0$	0.9756 (164)
$[\mathrm{Tem1}]_0$	0.7519 (126)
$[\mathrm{Polo}_T]_0$	0.4182 (1242)
$[\mathrm{Polo}_A]_0$	0.3726 (1106)
$[\mathrm{UDNA}]_0$	0
$[\mathrm{SPNALIGN}]_0$	0
$[\mathrm{ORIFLAG}]_0$	1

Initial concentration values in the deterministic simulations and the initial numbers of molecules in the stochastic simulations (in parentheses). The conversion of concentrations to numbers of molecules is explained in [8,11]. In *cln3* stochastic simulations, the initial number of Cln3 molecules is set to zero, other values are shown as above. For *MET3-CLN2 cln3* stochastic simulations (with forced *CLN2* expression), the initial numbers of molecules come from the end points of 2000 min *cln3* simulations in order to mimic the experimental conditions in [7].