**S4 Table. Parameter changes and initial conditions used to simulate mutant alleles.**

For mutant strains that carry combinations of these alleles, we used combinations of these parameter changes.

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| Mutant allele | Parameter change(s) |
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| *CDH1* constitutively active |  |
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|  | 2 copies of *GAL-CLB2* |
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\* In galactose medium, *mdt* =150 min, and mother:daughter size ratio at birth = 61:39.

\*\* Since the ratio between Sic1 and Cdc6 is 1:2, the synthesis rate of CKI in  cells should drop to 2/3. However, we reduce the synthesis rate of CKI in this mutant to ~1/8 to account for the fact that Cdc6 does not bind to Clb5 and Clb2 as strongly as Sic1 does.

\*\*\* We set the parameter *ρ*14,net1 < 1 to reproduce the weaker interaction between Net1 and Cdc14 in strains carrying these alleles.