

Figure 5-figure supplement 2: Model parameters for DLD-1 and RPE-1 p53^{-/-} cells.

Symbols	Description	DLD-1	RPE-1 p53 ^{-/-}	Range for data fitting	Reason/Source of information
b_{C2}	Proliferation rate of C ₂ and SC cells	1.2 d ⁻¹	0.94 d ⁻¹	0.8~1.2 d ⁻¹	Range estimated from growth curves (not shown)
b_{C4}	Proliferation rate of C ₄ cells	1 d ⁻¹	0.6 d ⁻¹	0.6~1 d ⁻¹	Range estimated from growth curves (not shown)
q	Probability of bipolar division in C ₂ cells	0.975	0.975	0.975~1	1 - (prob cytokinesis failure ⁴⁰)
p	Probability that a C ₄ cell undergoes bipolar division	0.33	0.25	Fixed	Figure 1B
r	Probability of symmetric division in a bipolar division of C ₄ cell	0.5	0.7	Fixed	Figure 5C
f_s	Probability that a C ₄ cell deriving from a multipolar division of C ₄ survives	0.4	0.7	Fixed	Inferred, Figure 3-figure supplement 1
dc_2	Death rate of C ₂ and SC cells	0	0	Fixed	Rates of spontaneous cell death are negligible in both cell lines
dc_4	Death rate of C ₄ cells	0.5 d ⁻¹	0.12 d ⁻¹	Fixed	Inferred, Figure 2F, H
dc_6	Death rate of C ₆ cells	1.5 d ⁻¹	1.5 d ⁻¹	Fixed	Comparable to rate of cell division, because C ₆ progeny dies due to multipolar division
v	Probability of getting SC cell from a cytokinesis failure event	0.22	0.32	0~0.6 †	Range suggested by Figure 3C-figure supplement 1; value obtained from data fitting (Figure 5D, E)
r_s	Probability that an SC cell divides symmetrically	0.93	0.90	0.5~1 †	Reason for range: the SC subpopulation likely sustains itself via symmetric divisions; value obtained from data fitting (Figure 5D, E)

† Parameters that only apply to Model II.