Model of the mammalian cell cycle with 3 different tools


(1) GINsim results

Two asymptotic behaviors:
• With CycD = 0: one stable steady state (G1 arrest: Rb=1, p27=1, Cdh1=1)
• With CycD = 1: unique multi-cycle attractor

For CycD = 1, the state transition graphs according to two different updating strategies: synchronous and asynchronous are shown:

(2) BoolNet results

Two asymptotic behaviors are observed according to the initial state of CycD
(Not that BoolNet provides computations with synchronous update strategy)

(3) MaBoSS results

Two indecomposable stationary distributions (clusters):
- One fixed point: Rb = 1, CDH1 = 1, p27 =1 (not shown)
- One multi-cyclic attractor

Time dependent activity of cyclins (initial condition: CycD=1)