

S4 Figure: Influence of the gene switching rates on single-cell stochastic trajectories for  $p53_{tot}$  and Mdm2<sub>tot</sub>. (A) and (B): nominal gene switching rates. (C) and (D): 10-fold increased gene switching rates. The irradiation phase started at Time = 300 h and lasted for 10 min, the irradiation dose was 4 Gy. The dynamics of the  $p53_{tot}$  and Mdm2<sub>tot</sub> weakly depends on the gene switching rate, although its increase leads to some decrease of the amplitude of fluctuations in unstimulated cells. Notice the logarithmic scale on vertical axes.