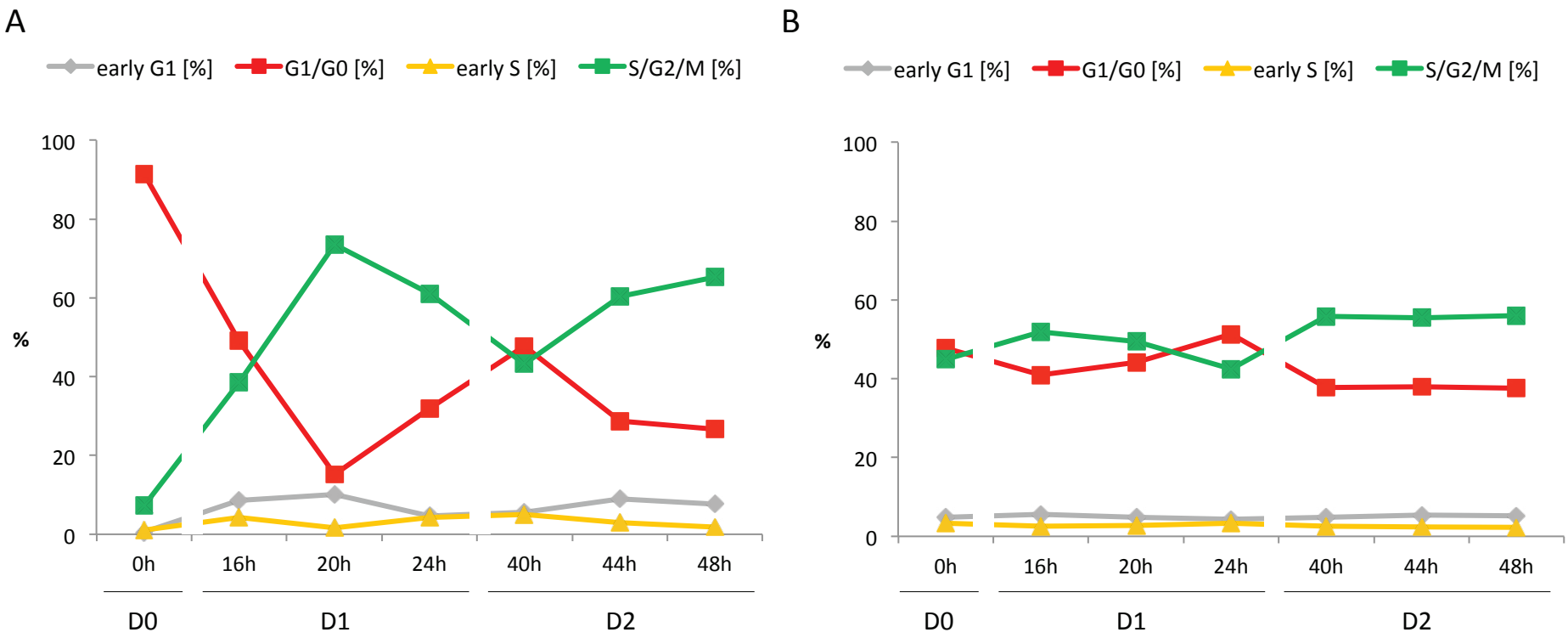


**Figure S1. Cell cycle progression of synchronized CHO Fucci cells.** Cells were synchronized by A) serum deprivation, or B) contact inhibition. Cell cycle distribution data is represented as percentages of cells in a given cell cycle phase at the indicated time post release from the cell cycle arrest. Flow cytometry measurements were taken on the day of release at day 0 (D0), and during the first and second mitotic cycle at day 1 and day 2 (D1 and D2).

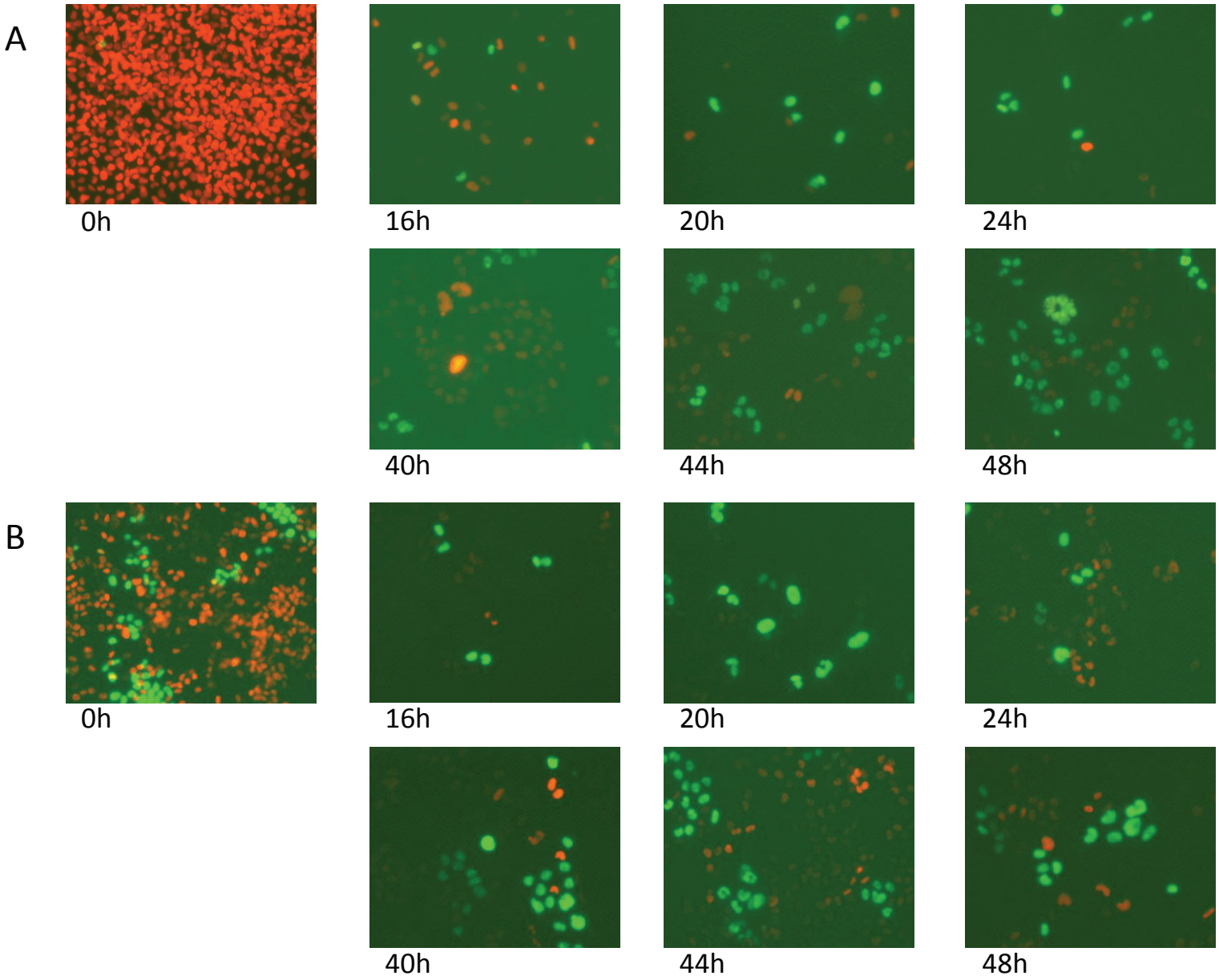


**Figure S2. Microscope images of synchronized CHO Fucci cells.** A) Serum starvation, B) contact inhibition. Time post release from cell cycle arrest is indicated below each image. All images were acquired using the same exposure time.

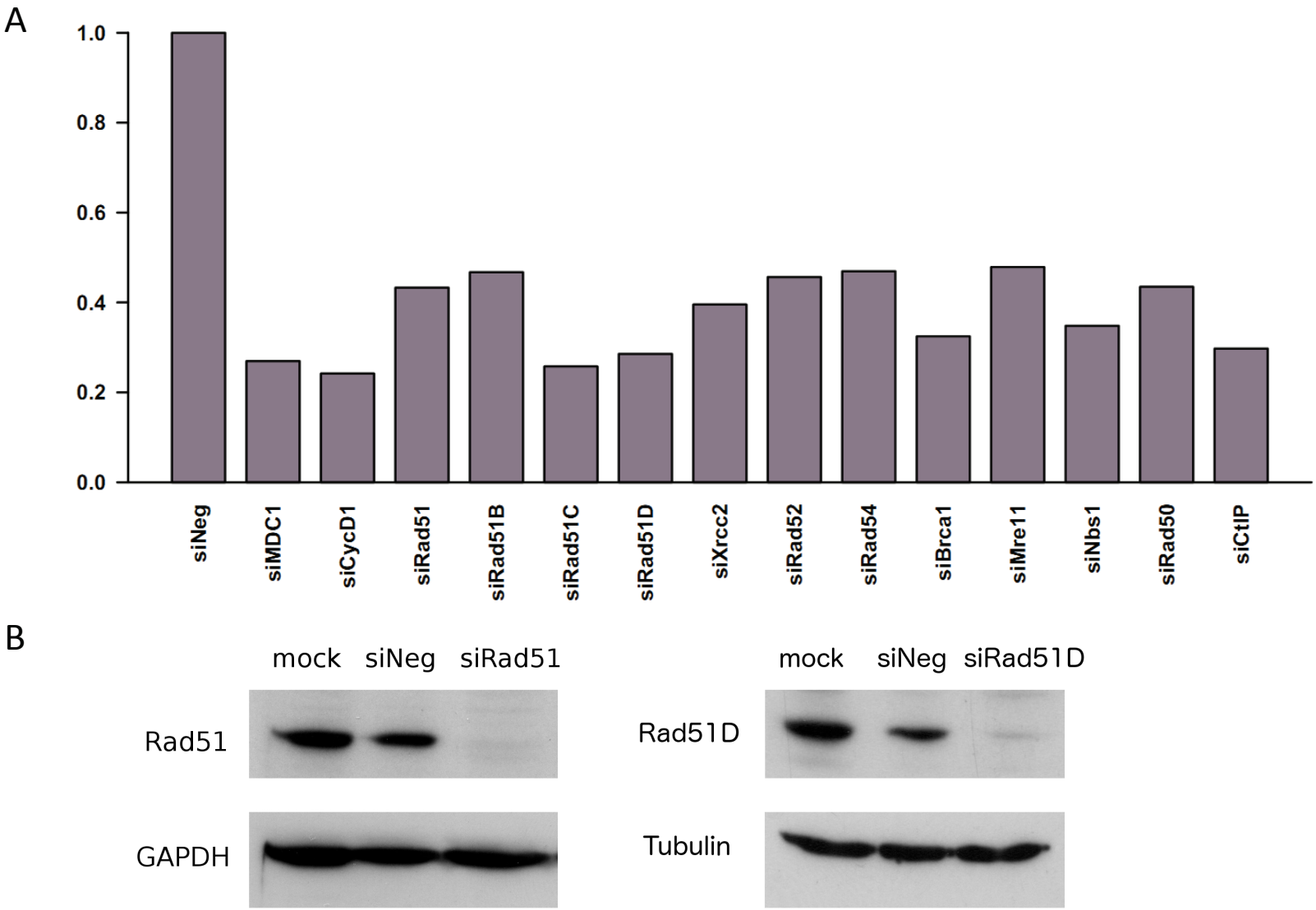


**Figure S3. The effect of siRNA knock-down on target mRNA and protein levels.** CHO cells transfected with three siRNAs targeting the indicated gene, with three non-targeting siRNAs (siNeg) or left untreated (mock). A) The mRNA level of the target was quantified by qPCR using specific primers. Values were normalized to the target mRNA levels in cells transfected with the non-targeting siRNA. B) Western blotting for Rad51 (left) and Rad51D (right) in total protein extracts isolated from CHO cells. GAPDH and Tubulin are loading controls.

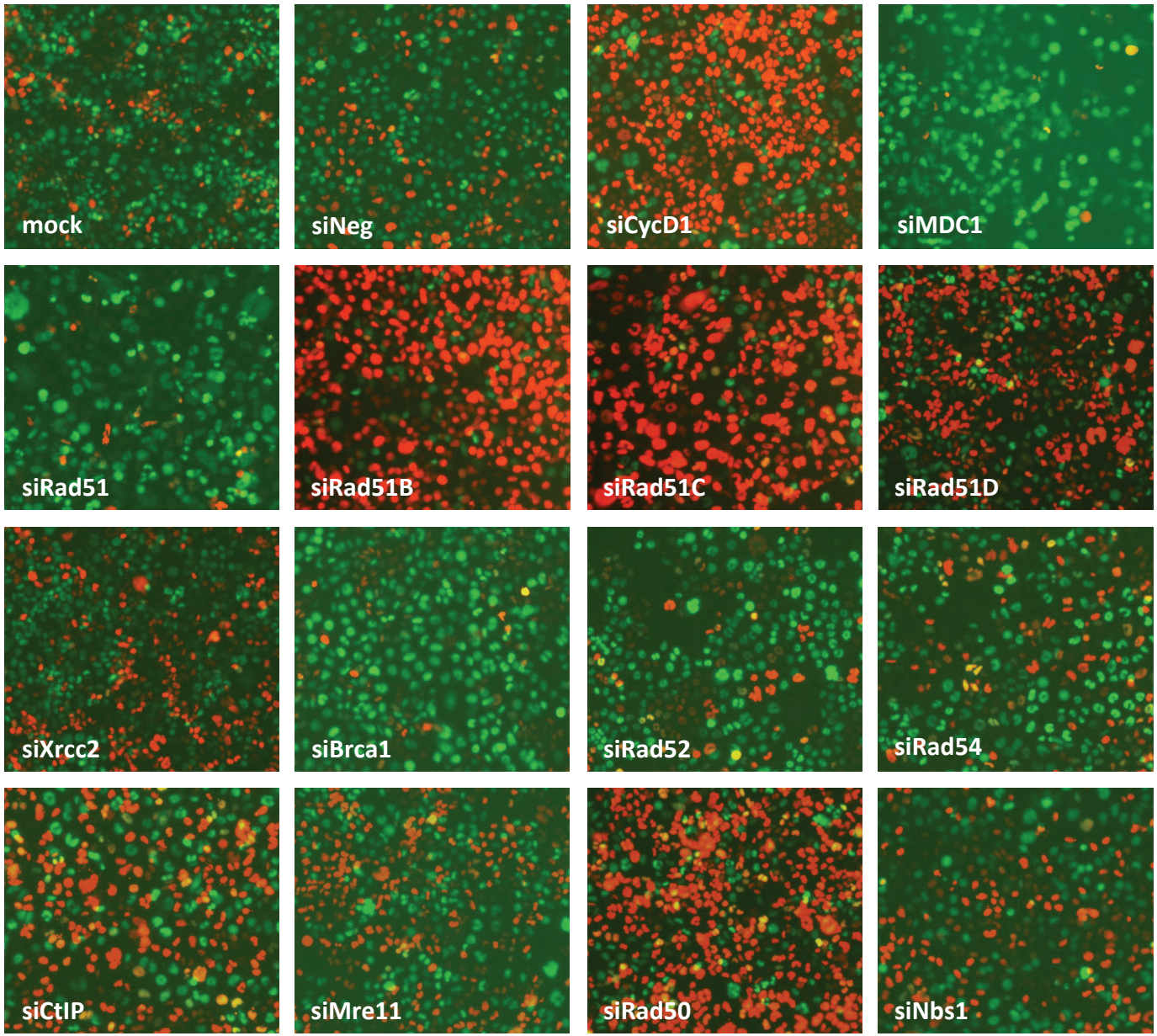


**Figure S4. Microscope images of CHO Fucci transfected with siRNAs against HR factors.** Images acquired 72h after the indicated siRNA transfection, or applying the transfection reagent only (mock).

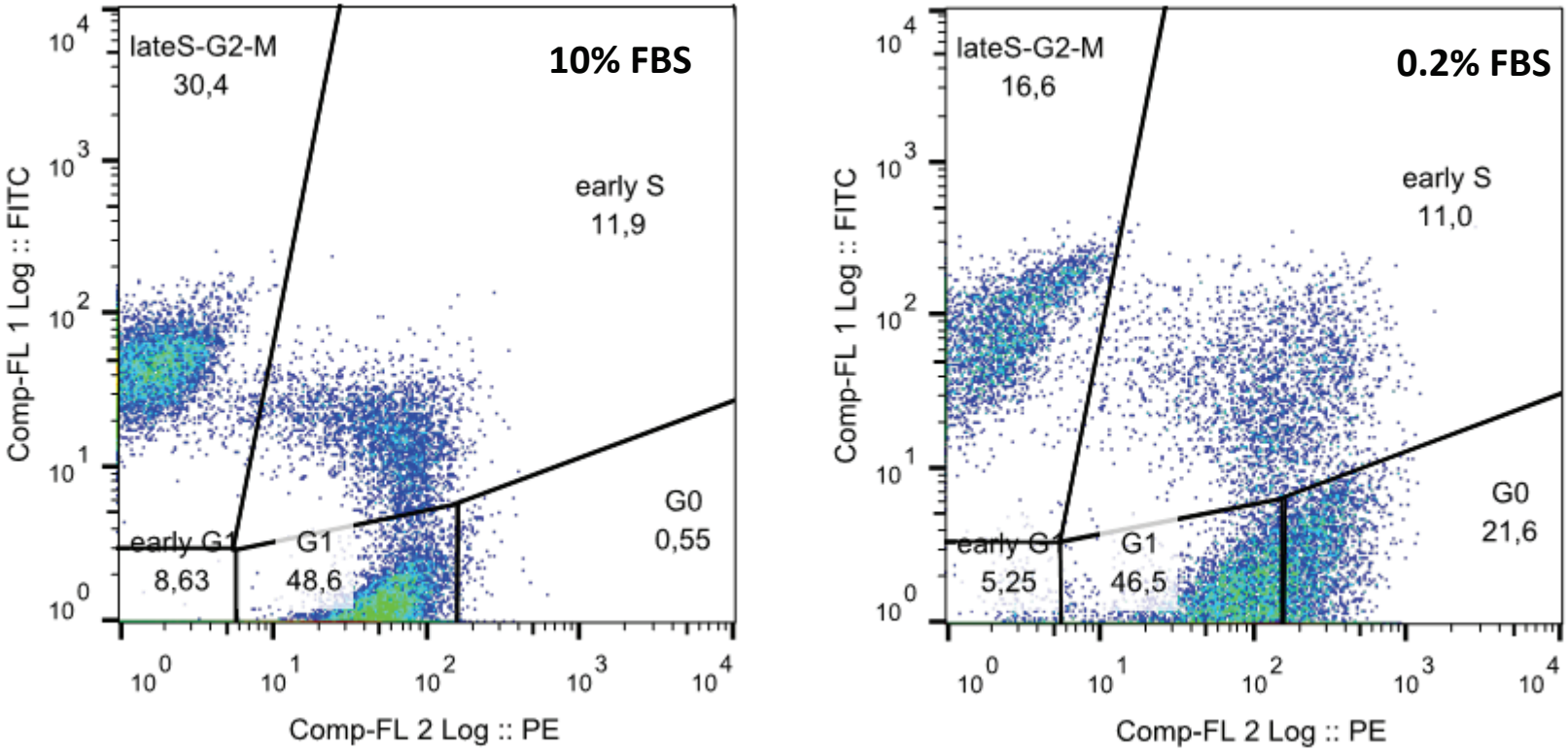


**Figure S5. Flow cytometry profiles of CHO Fucci cells grown in full medium or with low serum.** The amount of fetal bovine serum (FBS) in the medium is indicated on each plot. Actively growing cells in full-serum medium are shown on the left, and mostly quiescent cells grown under low serum conditions are shown on the right.

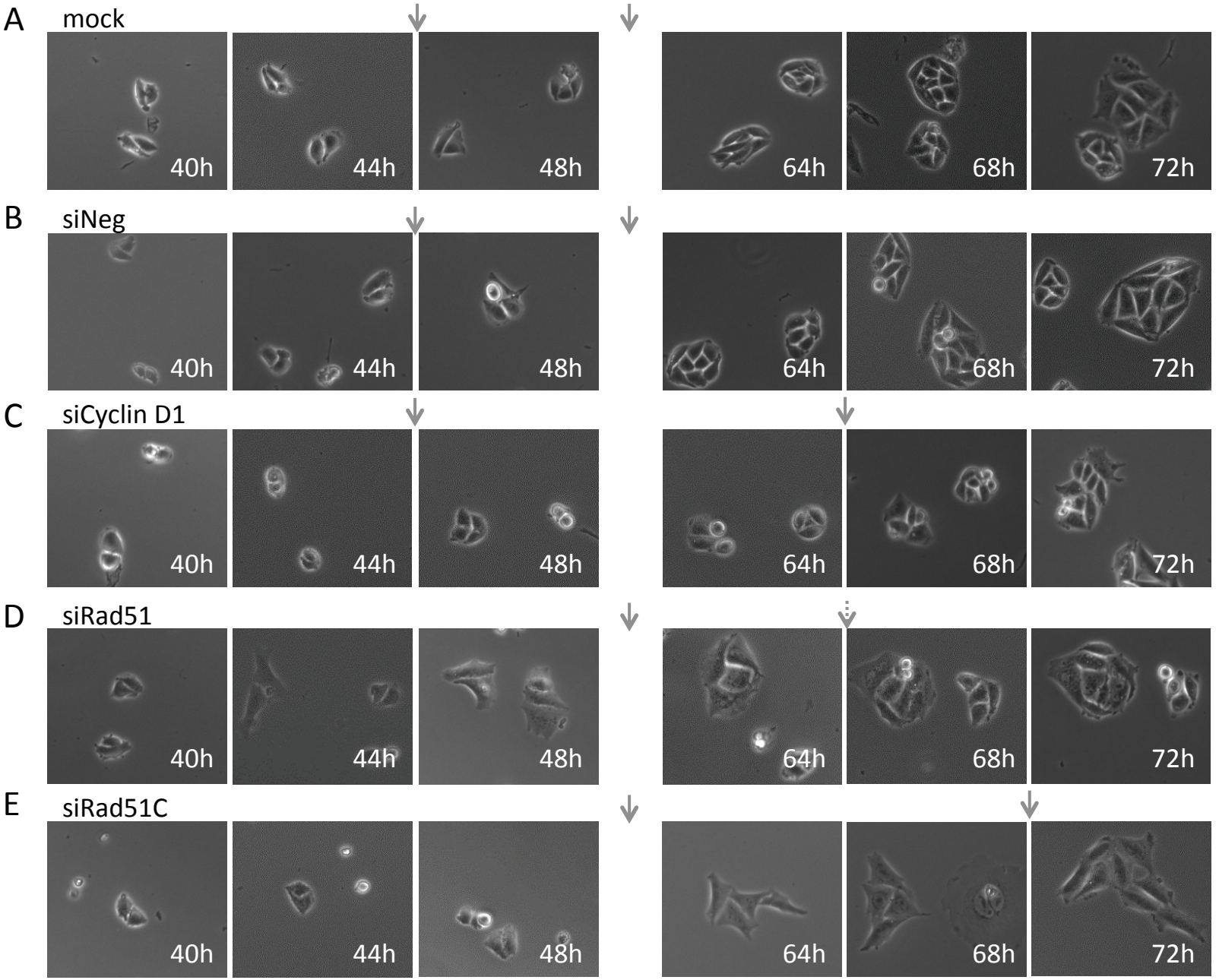


**Figure S6. Phase contrast images of cells synchronized in early S phase.** Images were acquired at the indicated time post siRNA transfection. Arrows and dotted arrow indicate the estimated division time of the cells, or of a cell subpopulation.