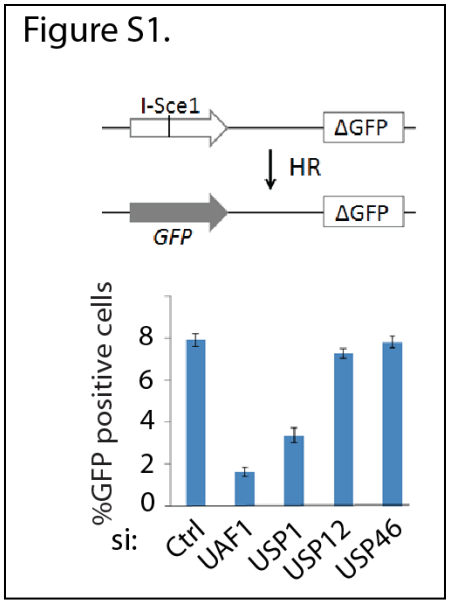

Figure S1. USP1 or UAF1 knockdown inhibits the HR repair activity in the DR-GFP assay.

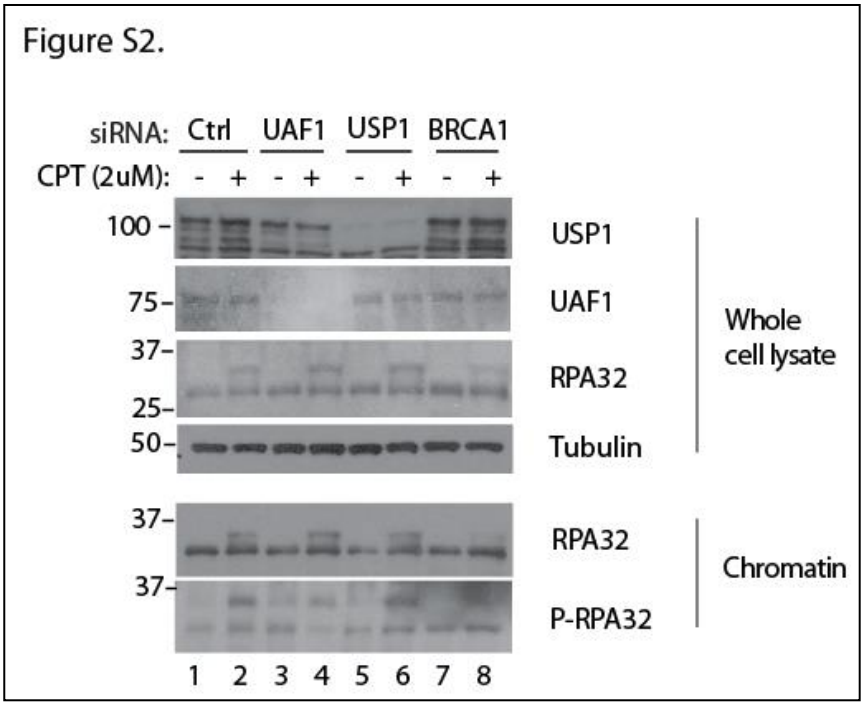

Figure S2. USP1 or UAF1 knockdown does not significantly affect the CPT-induced RPA phosphorylation. HeLa cells were treated with the corresponding siRNAs, then ~60 hours later the cells were treated with 2uM Camptothecin (CPT) for ~ 16 hours, followed by harvesting the cells for western blotting. P-RPA indicates phospho-RPA32 (S4/S8).

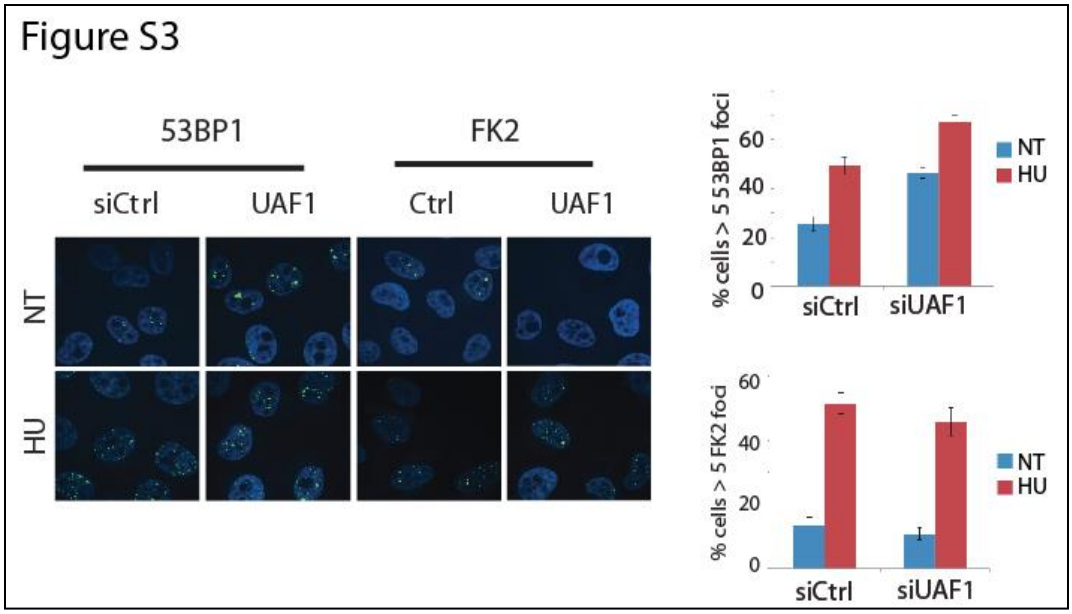

Figure S3. USP1 or UAF1 knockdown does not impact on canonical DSB signaling mediators 53BP1 and Ubiquitin (FK2 antibody). On the right is the quantification of three independent experiments.

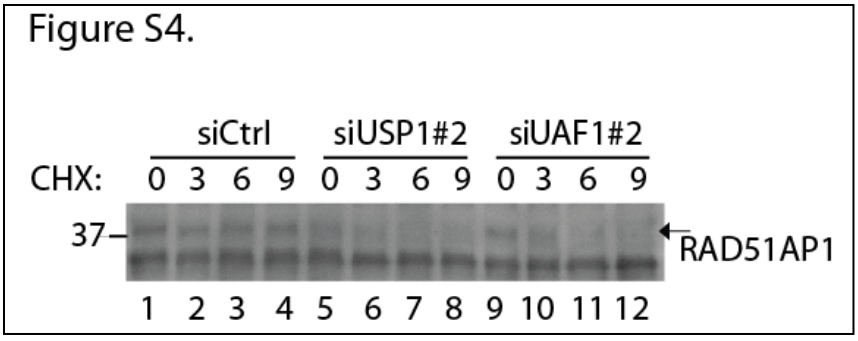

Figure S4. Transfecting 2nd siRNAs for USP1 and UAF1 also affects RAD51AP1 stability in HEY cells.

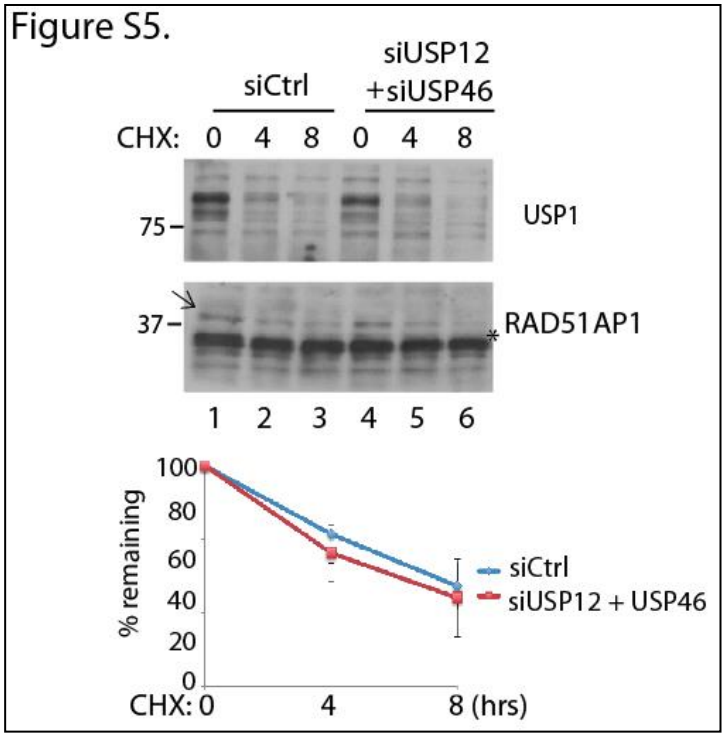

Figure S5. USP12 or USP46 does not significantly affect the RAD51AP1 stability (*indicates non-specific band)

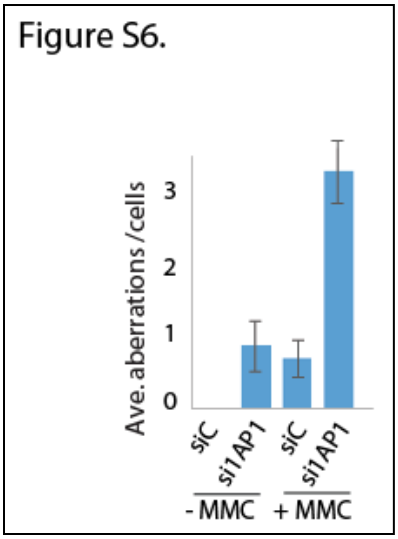

Figure S6. RAD51AP1 knockdown in U2OS cells increases chromosomal aberrations in response to MMC (100nM, 48 hours). Quantification was done from three independent experiments.

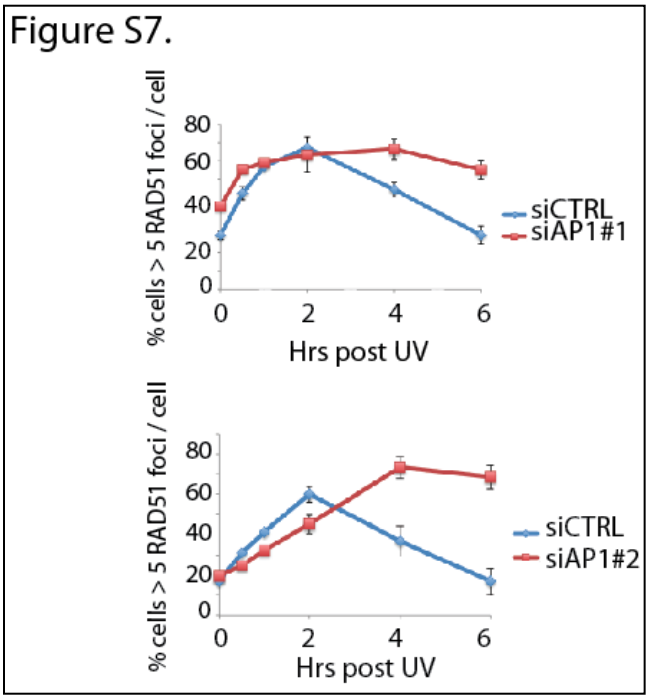

Figure S7. RAD51AP1 (AP1) knockdown (two siRNAs) in HeLa cells impairs the RAD51 foci resolution. Quantification was done from triplicates.